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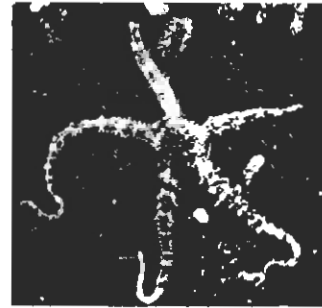
# THE *Wild* SEA

SAVING OUR  
MARINE HERITAGE

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# The Case for MPAs



**I**N ORDER TO ENSURE A HEALTHY, biologically diverse, and productive Gulf of Maine, our strategies must be systematically targeted at reducing pollution, maintaining sufficient spawning stock of all marine species so that reproduction rates are not jeopardized, and protecting marine habitats to ensure that the marine system can sustain its native plants and animals. Most of our marine conservation efforts to date have been targeted at rebuilding the spawning biomass of only the commercially important species of fish and shellfish and at reducing pollution of the marine environment.

Very little attention has been paid to physically protecting the marine habitats in which these species are born, live, reproduce, and die. Even less attention has been paid to the conservation of all the other organisms that currently have no commercial value, yet may hold the key to the health of the ecosystem. The importance of a well-designed system of marine protected areas (MPAs) in the Gulf of Maine is that it provides a rational, scientifically driven mechanism to conserve and restore the magnificent biodiversity that should be the fundamental hallmark of the Gulf.

## **Anatomy of an MPA**

MPAs come in many shapes and sizes and need

to be specifically designed to conserve the marine environment. They also promote the preservation and restoration of our marine heritage including important or unique habitats, rare plants or animals, or key biological communities. A protected area in the sea is not a single concept. It is as multi-dimensional as the biodiversity it fosters.

Sites can and should differ based on the conservation issues they address, the management schemes they employ their size, and their success. Depending upon the area, conservation goals can vary from a strict preservation standard to a biologically sustainable multi-use approach. For example, in some sites, protection is absolute—no human uses are allowed. In other sites, protection is flexible—most activities can continue, but are managed in a new, more coordinated way.

On land, the range of terrestrial protected areas suggests a rich vocabulary of area distinctions that have been identified over the centuries. Years of familiarity have even given their names the connotation of a certain approach to conservation. We have national parks, state parks, city parks, national wildlife refuges, private sanctuaries and preserves, wilderness areas, town conservation land, national and state forests, public and private arboreturns—to name just a few. Each one of these areas is set

## The NOS marine sanctuaries and estuarine reserves divisions

Although much smaller than NMFS, a far greater proportion of NOAA's National Ocean Service is dedicated directly to the designation and management of MPAs. The National Marine Sanctuary Division manages 12 National Marine Sanctuaries (NMSs) nationwide, one of which is off the Massachusetts coast, and the Estuarine Reserves Division oversees a system of 22 state-operated National Estuarine Research Reserves (NERRs), three of which either border on or are within the Gulf of Maine.

Of the two programs in this division, the Sanctuary Program most closely resembles the idea of a "protected area in the sea." Although the entire area of all the sanctuaries combined nationally equals less than one percent of all federal waters,<sup>6</sup> they remain the only federal programs with an irrefutable and specific mandate to conserve and coordinate management of discrete areas of the marine environment.

### *National Marine Sanctuary Program*

The sanctuary system is considered the flagship of all the federal MPA programs.<sup>7</sup> Although often referred to as the national parks of the sea, national marine sanctuaries are in fact something quite different. Unlike national parks, their mission is not simply one of preservation. Instead, sanctuaries are established to coordinate the conservation and management of areas of "special national significance based upon ecological, cultural, recreational, or aesthetic values."<sup>8</sup>

To be established, each site must meet four basic criteria: 1) the site must be nationally significant; 2) "existing governmental authorities are inadequate or should be supplemented to ensure coordinated and comprehensive conservation and management...;" 3) designation will provide or improve "coordinated and comprehensive conservation and management" of the site and its resources; and 4) the site's size and nature must be suited to "coordinated and comprehensive conservation and management."<sup>9</sup> Once established, a sanctuary's role is to promote research, enhance education, and facilitate all compatible public and private uses while furthering the conservation of critical resources such as whales, historic shipwrecks, coral reefs, or fishing grounds.

The conceptual emphasis of the program is on the conservation of complete systems through multiple-use management. In practice, however, few uses are prohibited in these sites. In fact, less than one-tenth of one percent of the combined sanctuary program area is off-limits to all commercial and extractive recreational uses.<sup>10</sup> Instead, each of the 12 currently designated sites (a 13th protecting cultural resources in the Great Lakes is scheduled for completion soon) allows most uses while protecting special values through individual management plans.<sup>11</sup> For example, various sanctuaries have regulated different combinations of human activities such as: oil and gas exploration and drilling, undersea mining, commercial tourism activities (such as whale watching), fishing, construction of floating or submerged structures, diving, mooring, research, or at-sea dumping or discharging.<sup>12</sup>

The national designation process for individual sites is cur-

rently officially dormant, leaving 29 potential candidates on the official Site Evaluation List (SEL) awaiting sanctuary designation.<sup>13</sup> An attempt was made in 1990 to reevaluate these recommendations and, where necessary, add or delete sites on the SEL, but it was abandoned due to funding shortfalls.<sup>14</sup>

If the SEL is reactivated, the agency will issue new site selection criteria.<sup>15</sup> Some of the current bills to reauthorize the Sanctuary Act, however, include a temporary moratorium on new sites until existing sites are sufficiently staffed and adequately managed. Meanwhile, those sites already on the SEL will remain there and are in theory still available for the next stage of the designation process, which is the selection of Active Candidates from the SEL by NOAA.

Once a site is selected to be an Active Candidate, Congress reviews the proposal and draft management plans and environmental impact statements are then prepared.<sup>16</sup> This period of public consultation has become an important part of the law's designation and management review process, sometimes consuming years in public meetings and consensus-building pro-



cesses.<sup>17</sup> Following a period of agency consultation, a proposed site can be designated a National Sanctuary by the Secretary of Commerce or by Congress.<sup>18</sup>

The first sanctuaries were generally small and focused on preserving or protecting specific components of the marine environment—not an ecosystem. For example, the U.S.S. Monitor National Marine Sanctuary, designated the first sanctuary in 1975, is intended to protect the historical attributes of the *USS Monitor's* sunken remains, a Civil War-era gunship resting on the seafloor 16 miles off of the North Carolina coast. This sanctuary is a far cry from the multiple use ecosystem protection envisioned by the legislation. It is only one square mile in area.<sup>19</sup>

All of the more recent sanctuaries have been created with an eye towards natural resource protection, research, and multiple use. The best example is the 1990 designation of the Florida

Keys National Marine Sanctuary.<sup>20</sup> At nearly half the size of New Jersey, it is managed in part through three different types of no-take zones—sanctuary preservation areas, research-only areas, and an ecological reserve. Although these comprise only one percent of the sanctuary's 2,800 square nautical miles, they cover most of its coral reef habitat. Other protected habitats include mangrove communities, hard bottom areas, sand flats, and sea grass meadows.

Both these areas and the coral reefs are also managed by programs to monitor changes in wildlife populations and ecosystem function, protect water quality, promote science, install and maintain mooring buoys, mark channels, and educate the public. The early signs of success of the zoning activities have attracted interest among some marine protected area proponents in New England who believe that this region's only sanctuary, Stellwagen Bank National Marine Sanctuary, could benefit from similar zones as well.

Three New England sites are on the SEL, not yet selected as Active Candidates within the program. These sites include: the Narragansett Bay/Block Island Sound area; the Nantucket Sound and Shoals/Oceanographer Canyon area; and, in the Gulf of Maine, an area called the Midcoast, which extends along the Maine coast from the eastern edge of Casco Bay to the southwestern edge of Penobscot Bay and encompasses more than 100 species of birds, fish, shellfish, and marine mammals.<sup>21</sup> Whether a future revaluation of the SEL will affect the status of these sites is unknown.

Besides Stellwagen, only one New England site has achieved Active Candidate status. In 1979 Georges Bank was added and then later removed as Active Candidate during the height of the controversy over the leasing of exploration sites for oil drilling. Its denial reflected the agency's assessment that this site was adequately protected by existing management programs.<sup>22</sup> Given the dramatic fishery declines of the 1990's, some may now question the accuracy of this assessment.

#### *National Sanctuaries in New England:*

*Gerry E. Studds Stellwagen Bank National Marine Sanctuary*  
Encompassing a natural sandy underseas plateau is New England's only national marine sanctuary: the Gerry E. Studds Stellwagen Bank National Marine Sanctuary (NMS). Just over half the size of Rhode Island, the Stellwagen Bank NMS lies in an elongated rectangle connecting the sandy shores of Cape Cod with the rocky headlands of Cape Ann, Mass.<sup>23</sup> The bank itself is a primarily sandy feature, lying just 65 feet beneath the surface at its shallowest depths and more than 100 feet at its deepest.<sup>24</sup> Also encompassing Tillies Bank, Tillies Basin, and the southernmost portion of Jeffrey's Ledge, the sanctuary was created in 1992 after a decade of effort that began when the site was nominated by the Center for Coastal Studies and Defenders of Wildlife.<sup>25</sup> In the late 1980's, following congressional pressure led largely by then Massachusetts Rep. Gerry Studds,<sup>26</sup> Stellwagen became the nation's 11th marine sanctuary.

Relatively large compared to other sites in the sanctuary program, Stellwagen's authorizing legislation prohibits only one use—sand and gravel mining.<sup>27</sup> Existing laws as well as regulations

implementing its five-year management plan, however, prohibit several more: exploring, developing, or producing industrial materials; at-sea transfer of petroleum products; and the taking of any historical artifact or any seabird, reptile, or marine mammal. Still other activities cannot be conducted without a special sanctuary permit. Among these are discharging or depositing most materials directly or indirectly into the sanctuary's waters; drilling, dredging, or altering the seabed; constructing, placing, or abandoning any structure on the seabed (except for fishing, anchoring, or navigation); and possessing any historical artifact, seabird, reptile, or marine mammal.<sup>28</sup>

All other uses are managed from a multiple-use approach that, to date, does not involve any zoning of the site. Instead, the sanctuary staff attempt to cooperate with other agencies to promote coordinated use and management of the site's resources. Recently, they have participated in regulating whale watching (both commercial enterprises and private individuals), and in negotiations to reduce the threat of commercial ship strikes on endangered whales, especially the northern right whale.<sup>29</sup>

Many believe that the sanctuary needs to take a stronger stand in protecting the resources under its jurisdiction. It may be one of the only authorities that can regulate vessel speed, a rule that could help avert collisions between boats and whales.<sup>30</sup> Among others, the establishment of no-use zones for research is gaining favor, although these are likely to be opposed by fishermen. And some advocates want a more comprehensive zoning plan.

Notably, the sanctuary has not created any protective regulations concerning commercial fishing or its adverse effects on habitat, whales, seabirds, or other sanctuary resources.<sup>31</sup> Its current management plan deferred all fishery management author-



tion to emerge in one state while keeping the situation open to conjecture in another. For MPA proponents, this creates both a challenge and an opportunity that must be more fully considered when state establishment efforts truly get underway.

### Massachusetts

Marked by a distinctive coastal geography that hooks into the waters of the Gulf, Massachusetts supports a much larger population and economy on its 1500 miles of shoreline than either Maine or New Hampshire.<sup>13</sup> Coastal industries contribute \$70.7 billion dollars into the state's economy each year.<sup>14</sup> Up until recently, about \$1 billion of this was from fishing,<sup>15</sup> which employed about 20,000 people as either fishermen or workers in related businesses.<sup>16</sup> Impressive as this number sounds, it is only a small portion of the state's six million residents, nearly half of whom live in Greater Boston.<sup>17</sup> As the state's principal port, Boston is one of 78 coastal communities occupying a coastline of bays, coves, and estuaries that actually exceed the overall length of California's shoreline.<sup>18</sup>

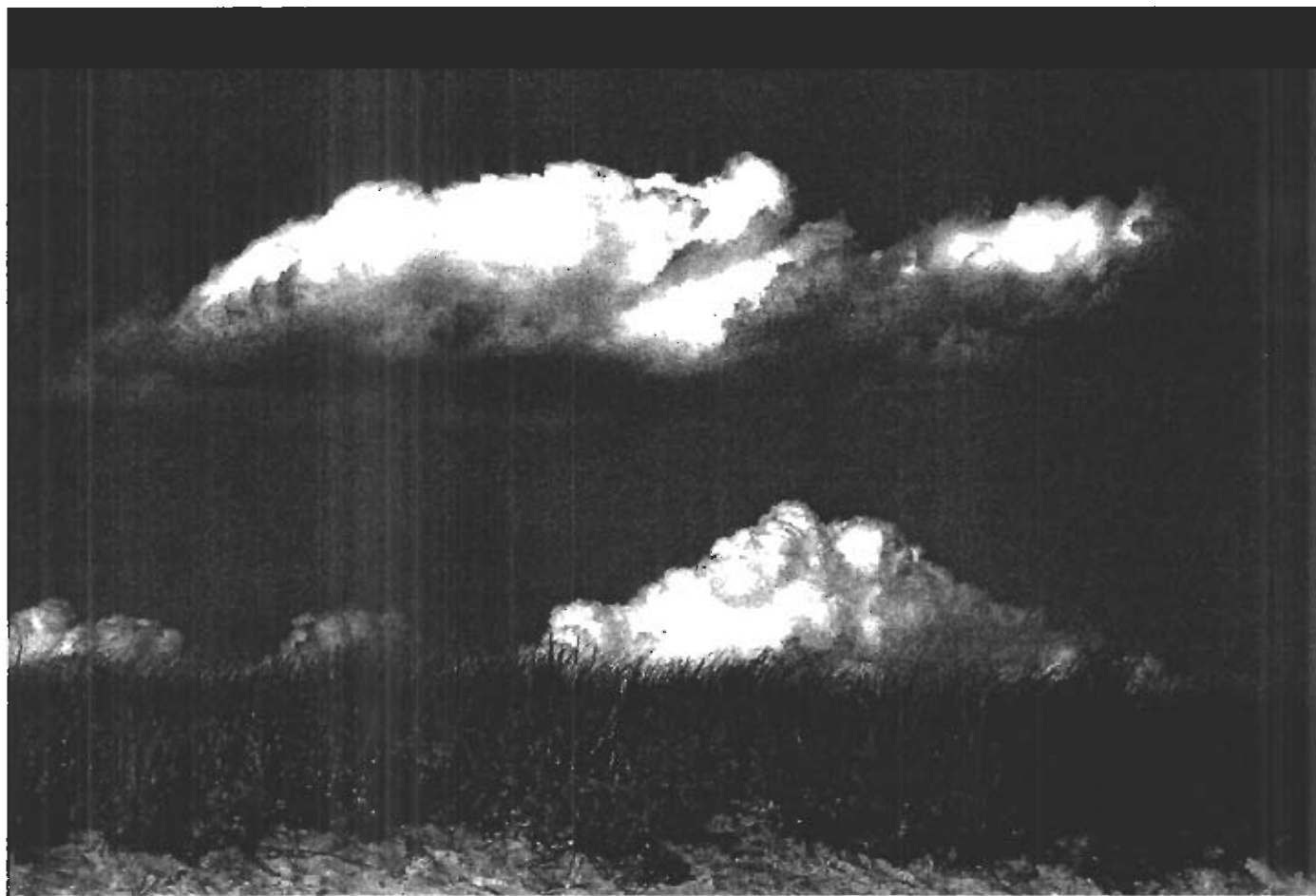
Given its geography, the remarkable number of people concentrated on its coast, and the significance of its coastal zone to the state's economy, the state's efforts to develop and promote a full range of MPAs in its coastal waters is not yet particularly impressive. Yet Massachusetts could lead the way if it chose to. Already it is the only Gulf of Maine state with legislation enabling regulatory MPAs, with designated MPA sites established under this law, and with a national marine sanctuary on its bor-

der. In addition, its Office of Coastal Zone Management is actively exploring marine research reserves for state waters.

The prospects, however, are limited. Most Massachusetts MPA authority resides within existing environmental management mandates that are not principally targeted on the conservation of marine biodiversity. These mandates are distributed among a diversity of competing state agencies within the Executive Office of Environmental Affairs: the Department of Fisheries, Wildlife and Environmental Law Enforcement; the Department of Environmental Management; the Department of Environmental Protection, the Massachusetts Coastal Zone Management Office, and the Massachusetts Board of Underwater Archeological Resources.

Absent a clear MPA mandate or policy from the state legislature, these agencies—which could both individually and collectively use their power to create MPAs—are largely subject to the political conditions that guide them. So far, these conditions have not been terribly favorable for MPA establishment. Those agencies that have taken steps in the direction of marine area protection created their programs many years ago through the limited options made available through existing legislation; or established proprietary marine protected sites incidental to a terrestrial conservation program; or designated regulatory areas as part of a program of fisheries or environmental management.

Unlike Maine or New Hampshire, the Massachusetts legislature enacted a law that extends the municipal boundaries of coastal communities three miles out to sea, making them virtu-





ally co-extensive with state lines.<sup>19</sup> Within these lines, each municipality can exercise a significantly larger marine role than similarly situated communities to the north.

The state laws give municipalities a great deal of power over activities on submerged lands. They can permit the removal, fill, dredge, or alteration of coastal wetlands. They can also manage harvesting of shellfish, eel, and sea worm,<sup>20</sup> shellfish aquaculture,<sup>21</sup> and the siting of coastal fish weirs, fish traps, and pound nets.<sup>22</sup> Among their protected areas power is the ability to petition their county to establish shoreland reservations;<sup>23</sup> to "locate parks" within the city or town (although no municipal underwater parks are known to exist);<sup>24</sup> to acquire land and water areas for open space protection through their Conservation Commissions,<sup>25</sup> and to close shellfish flats for up to three years.<sup>26</sup> Notably, the state has not interpreted this latter provision to allow successive closure periods as they view the law as promoting recreational shellfish harvesting rather than conservation.<sup>27</sup>

### Public Trust Doctrine

Massachusetts settlers imported the Public Trust Doctrine from England as the legal touchstone for defining public rights in the intertidal and subtidal environment, but modified it extensively by colonial ordinance. This early ordinance has since been enacted into statute and significantly expanded by agency regulation.<sup>28</sup>

Even so, the doctrine remains relatively narrow. In fact, Massachusetts has one of least "public" shorelines in the nation (at least 19 of the 23 coastal states allow the public full access to the intertidal zone).<sup>29</sup> Massachusetts is one of the few states along the U.S. coast that permits private property ownership to the historic low tide line.<sup>30</sup> This means that much of the intertidal zone may be privately owned, although private property interests are subservient to the rights preserved in the Public Trust Doctrine. Massachusetts defines these lands as "private tidelands"—"tidelands held by a private party subject to an easement of the public for the purposes of navigation and free fishing and fowling and of passing freely over and through the water."<sup>31</sup> This law reflects the development of the doctrine in the courts which have interpreted these rights quite narrowly, limiting them to "fishing, fowling, and navigation" as well as the "natural derivatives"<sup>32</sup> of these practices, such as the right to enter private lands to fish on them or to get to another area to fish,<sup>33</sup> shellfish,<sup>34</sup> or gather floating seaweed.<sup>35</sup> Similarly, the right to navigation also includes the right to sail or drop anchor.<sup>36</sup> Notably, this interpretation does not include more leisurely activities such as strolling, beach combing, or nature study.<sup>37</sup> In the intertidal zone, the state bears exclusive responsibility for managing and enabling the reserved public uses up to the mean high water mark, including private uses on private lands that could interfere with these rights.

More expansive are the public rights the state is bound to preserve in the subtidal zone. Here, where there is no private ownership, the state is charged with protecting the public's interest in what the statute calls "Commonwealth tidelands"—"tidelands held by the commonwealth in trust for the benefit of

the public or held by another party by license or grant of the commonwealth subject to an express or implied condition subsequent that it be used for a public purpose."<sup>38</sup>

### Executive Office of Environmental Affairs (EOEA)

Primarily responsible for the conservation and management of the state's natural environment, the EOEA operates as a super agency that encompasses a number of smaller state agencies with responsibilities for the natural environment. Among these are several with MPA potential including: 1) the Department of Fisheries, Wildlife and Environmental Law Enforcement, 2) the Department of Environmental Management, 3) the Department of Environmental Protection, 4) the Massachusetts Coastal Zone Management Office and 5) the Board of Underwater Archeological Resources. Each one has its own MPA or quasi-MPA authority, as reviewed below. Some have used their unique authority to designate sites and others have not.

#### *Department of Fisheries,*

#### *Wildlife & Environmental Law Enforcement*

This branch of the EOEA is responsible for protecting and managing the state's natural habitats, plants, wildlife, and marine species. Of its three divisions, two have MPA-related authority—the Division of Marine Fisheries and the Division of Fisheries and Wildlife. Although the latter is more commonly known for its management of terrestrial and freshwater aquatic resources, it does have several mandates that extend seaward, including the management of most marine wildlife other than fish. And where their fisheries jurisdictions have the potential for overlap, as in estuarine areas and tidal rivers or streams, Massachusetts law directs the two agencies to jointly set their jurisdictional boundaries.<sup>39</sup> Fish that fall within the Division of Marine Fisheries purview occupy waters labeled "coastal" or "territorial."<sup>40</sup> The Division of Fisheries and Wildlife is responsible for all the other fish that live in "inland waters."<sup>41</sup>



*Division of Marine Fisheries (DMF)*—Charged primarily with the management and promotion of commercial and recreational fisheries in the state's coastal waters, this division also monitors contaminant levels in fish and shellfish, assesses the fishery impacts of coastal development, and assists municipal shellfish management.<sup>42</sup> Yet its potential for MPA work resides mainly within its fishery management authority to regulate "the opening and closing of areas within the coastal waters to the taking of any and all types of fish."<sup>43</sup>

This, however, is not an absolute authority. Prior to adopting certain management rules, the Director must first propose them to the state's Marine Fisheries Advisory Commission, which will approve or disapprove the regulation following public hearing.<sup>44</sup> For closing and opening areas, the Commission in turn is required to obtain the consent of the selectmen of any town or the mayor and council of any city affected by such a closure.<sup>45</sup> Once all necessary approvals are given, the Director of DMF can adopt, amend, or repeal a regulation.

Closure authority is quite extensive, arguably encompassing the power to create permanent no-fishing areas in state waters. However, no such action has yet been taken. Although Massachusetts has numerous fishery closures, most are either species-specific or gear-specific. Most last for a specified number of months each year. For example, to protect spawning fish between February and May, Massachusetts closes most of its inshore waters to commercial fishing for finfish.<sup>46</sup> At other times of year, certain areas are closed to mobile gear.<sup>47</sup> And all state waters from Plymouth to the New Hampshire border are closed part of the year to groundfish fishing.<sup>48</sup> During set periods, areas are closed to fishing for surf clams, sea urchins, lobsters, juvenile eels, as well as other species and gear types. DMF has also created a short-term closure to protect the northern right whale.<sup>49</sup> From January to mid May each year, gillnets are prohibited from the animal's critical habitat in Cape Cod Bay (see also *Appendix A*). Among all these fishery rules there are only a few year-round permanent closures. Among them is a lobster closure in Acushnet River Estuary<sup>50</sup> and a ban on commercial fishing for winter flounder in Mount Hope Bay,<sup>51</sup> both outside the Gulf of Maine.

*Division of Fisheries and Wildlife (DFW)*—The Division of Fisheries and Wildlife is principally tasked with the conservation and management of terrestrial and freshwater aquatic resources. DFW regulates human uses that affect both game and non-game wildlife species (except marine fish) on state lands and other habitats. As part of its role, the division can establish and manage different kinds of protected areas including wildlife management areas, wildlife sanctuaries, and nature preserves. In addition, the division can heighten thresholds for permitting for certain high-value wildlife sites. Although most of these protected area designations have targeted conservation of land or freshwater habitats, the authority may provide an a venue for the creation of MPAs. A few of the DFW coastal sites, some of which were created for marine birds, may already encompass adjacent estuarine or salt waters beyond their intertidal boundaries.

The "Wildlife Management Area" (WMA) authority is the most common tool the division uses to set aside lands to conserve species and habitats. Technically, this label encompasses most of its land holdings, although internally, the division distinguishes between WMAs it promotes for outdoor recreation, such as hunting, trapping, fishing, and snowmobiling and those it does not. Sites where the division encourages public access



with maps, signs, and website information are labeled wildlife management areas. Sites referred to as "Natural Heritage Areas" are not promoted because they contain vulnerable or rare species or communities. The division also owns a little less than 700 acres of salt marsh as well as other areas, which it does not usually label as wildlife management areas.<sup>52</sup>

The actively promoted WMAs are maintained, generally without management plans, in their natural state and administered to allow a wide range of seasonal outdoor pursuits, and area acquisition is funded in part by user fees from some of these activities.<sup>53</sup> Of the 100 WMAs listed, several are coastal or estuarine areas in the Gulf of Maine. In the northeast, the William Forward WMA, located in Newbury and Rowley, contains a significant amount of intertidal salt marsh. In the southeast, the division owns a 76-acre portion of the Fox Island Salt Marsh in Wellfleet.

In the Division's two eastern districts there are 15 Natural Heritage Areas, which are more biologically sensitive than regular WMAs and also tend to be smaller. The division makes no maps to encourage public access nor do they mark the sites with signs. In essence, they use the relative anonymity of the sites to protect them from use.<sup>54</sup> Only one of these sites, Eagle Island in the Merrimack River estuary, is coastal.

Wildlife sanctuaries are a second category of protected areas the division owns and controls.<sup>55</sup> They are an entirely different kind of site. Mainly used during the 1920s and 30s, this designation enabled the establishment of 12 sites on properties donated to the state—the last one in 1945. Unlike the WMAs, these sites prohibit most human uses apart from hiking, birding, and quiet enjoyment.<sup>56</sup> The list of prohibited uses is extensive and includes not only hunting but also operating all kinds of vehicles.<sup>57</sup>

Among the 13 existing sites are seven coastal islands total—

ing 228 acres that support seabirds, waterfowl, and shorebirds.<sup>58</sup> One site, Billingsgate Island off of Wellfleet is actually a half-acre, shifting sandbar that disappears at high tide and provides habitat for quahogs, grass shrimp, herring, menhaden, sea ducks, and harbor seals. Another site, Ram Island in the Merrimack River estuary, contains 20 acres of salt marsh that support mi-



gratory shorebirds and wintering waterfowl. Carr Island, adjacent to Ram Island, contains tidal creeks and marshes as well.

Nature preserve is the third designation the division employs to establish protected areas on state property.<sup>59</sup> Enacted into law about 10 years ago, it appears to be an obvious tool for creating MPAs in Massachusetts. Nature preserves can be established over any state-owned, EOEA-controlled area that contains "rare, exemplary, or other significant, natural, or biological communities or which contain significant features of native biodiversity."<sup>60</sup> This authority has not been significantly exercised to date anywhere in the state.

Administration of the dedication and management of these preserves is overseen by the Natural Heritage & Endangered Species Program. Sites are nominated into the program, however, by agencies within the EOEA. Ten citizens can also start the process by requesting an agency to nominate a site. If an agency grants the request, they work with the citizens to complete nomination documents.<sup>61</sup>

By regulation, all nature preserves are subject to a suite of regulations in addition to those contained in their protection plans. These include limits on public access, permit requirements for research, introducing plants or animals, and damaging vegetation, soil, rocks, or earth. Fishing, hunting, and trapping are allowed unless prohibited by the management plan.<sup>62</sup>

Although this law has been in place for 10 years, there is only one designated nature preserve in the state. It is located in the central town of Holden. Another has been nominated in an upland area of Barnstable on Cape Cod. According to program staff, however, there is growing interest in using the designation more actively. No plans, however, currently exist for any coastal or marine areas.<sup>63</sup>

Beyond these three types of proprietary protected areas, the division can also create at least two other kinds of regulatory

protected areas. The first of these is the "estimated habitat" designation under the state's Wetland Protection Act.<sup>64</sup> Under this statute, proponents of projects that could alter wetlands (including intertidal and subtidal areas) must obtain permission from their local conservation commission before proceeding. Projects that would have short or long term adverse effects on the habitat of a species listed as rare must also be reviewed by the division's Natural Heritage & Endangered Species Program.

To assist in this process, the Natural Heritage Program has developed estimated habitat maps for rare wetland wildlife that are distributed to every municipality. Even though permits can only be issued theoretically for projects that will not have short- or long-term adverse effects on the habitat of rare or protected species, the Wetlands Act does not enable towns to deny a conservation permit to an applicant. It can only place conditions on a permit. At times, however, these may be so burdensome as to make the project infeasible.<sup>65</sup>

The division has designated all of Cape Cod Bay as Estimated Habitat for northern right whales (excluding an area from the immediate shoreline out to a few hundred yards offshore). Any development or construction activity within this area (which excludes the immediate shoreline) must be reviewed by NHES before being approved by a municipality.<sup>66</sup>

The other designation is "significant habitat" under the state's Endangered Species Act and regulations promulgated pursuant to it.<sup>67</sup> Massachusetts law allows any species of plant or animal to be listed as endangered or threatened by the Division of Fisheries and Wildlife.<sup>68</sup> Following a state species listing, the director may designate areas found to be significant habitat of that species.<sup>69</sup> These are "specific areas of the commonwealth" which contain "physical or biological features important to the conservation of a threatened or endangered species population" and "may require special management considerations or protection."<sup>70</sup> Unless otherwise allowed by permit or otherwise exempt under the law, alterations of these designated sites are illegal whether the area is privately or publicly owned.<sup>71</sup>

To date, Massachusetts has listed almost 100 animals and 200 plants as threatened or endangered.<sup>72</sup> Among these are a variety of marine and estuarine species including sea turtles, sea birds, shore birds, whales, and plants. Significant habitat designation could be used to protect the habitats of these and other listed species. Since the Act's passage, however, the state has not designated any areas, terrestrial or marine, as significant habitat despite promulgating an extensive regulatory process to do so.<sup>73</sup>

#### Department of Environmental Management (DEM)

As the largest landholder in the state, this department is the primary agency for natural, historical, recreational, and cultural resource planning and management. It is composed of two major divisions—the Division of Forests and Parks and the Division of Resource Conservation. In general, the former oversees the day-to-day operations and resource management responsibilities at state-owned sites such as parks, trails, forests, reserves, and the Waquoit Bay National Estuarine Research Reserve (see Appendix A: Federal Laws and Regulations). The latter supports this work through resource assessment, design, planning,



and science. Together they manage the ninth largest state forest and park system in the country.

The Division of Resource Conservation also oversees the administration of the Areas of Critical Environmental Concern Program, the Ocean Sanctuaries Program, and the Massachusetts Wildlands Program. The first two are regulatory designations that can be applied to marine areas to heighten their level of protection from particular human uses by setting higher environmental review standards. The latter is a heightened designation placed on DEM properties in recognition of their special characteristics.

Massachusetts is the only state in New England with a marine law that offers heightened environmental protections to specifically designated marine areas. The Ocean Sanctuaries Act,<sup>74</sup> passed in 1970, enabled the delineation of five ocean sanctuaries in Massachusetts waters during its first six years: Cape Cod Ocean Sanctuary, Cape Cod Bay Ocean Sanctuary, Cape and Islands Ocean Sanctuary, North Shore Ocean Sanctuary, and South Essex Ocean Sanctuary. These sanctuaries encompass most of the state's coastline and all of its waters from the mean low water line out to the boundary of its seaward jurisdiction. The only area excluded is the portion of Massachusetts Bay between Lynn to the north and Marshfield to the south.

Currently, the act states that the areas are to "be protected from any exploitation, development, or activity that would significantly alter or otherwise endanger the ecology or appearance of the ocean, seabed, or subsoil...."<sup>75</sup> Although this language would appear to provide very strict restrictions on use, only a few particular activities are actually prohibited. Because DEM only has the authority to review permits that other state agencies issue, the agency acts as the "caretaker" or trustee of the sanctuaries rather than the permitting authority. DEM implements the act by issuing regulations for other agencies to follow.

Among the activities specifically banned (by statute or by regulation) are:

- structures on the seabed or in its subsoil;
- offshore or floating electric generating stations;
- drilling or removal of sand, gravel, or other minerals, gases, or oil;

- dumping or discharge of commercial, domestic, municipal, or industrial waste;
- commercial advertising;
- incineration of solid waste on or in vessels;<sup>76</sup>
- any activity that would "seriously alter" an ocean sanctuary;<sup>77</sup>
- more than negligibly changing the flow, drainage, flushing, salinity distribution, sedimentation, flood storage, or table level of the waters;
- more than negligibly changing the temperature, oxygen of other water quality characteristics; and
- increasing development.

There are exceptions to all of these limitations. For example, the commercial and recreational harvest or propagation (i.e., aquaculture) of fish or shellfish is allowed in all five sanctuaries. Structures can be built too if they are determined by DEM to be "necessary to the public interest." Sand and gravel may be extracted for a DEM-approved shore protection or beach restoration project. Municipal wastewater may be discharged into the North Shore and South Essex sanctuaries and, under fairly uncommon conditions, in the other three sites as well. Another practice allowed under the law is the continued operation of facilities and discharges in place and properly licensed prior to the act's passage.<sup>78</sup>

DEM identifies the protection of "ecologically significant resource areas" and "complexes of marine resource areas of unique productivity" as two environmental policies to be pursued through its implementation of the act.<sup>79</sup> This language would seem to provide a means to limit particularly harmful fishing practices within sections of an ocean sanctuary. Yet actions have not yet been taken in pursuit of these policy objectives. As noted above, fishing and propagation of fish is allowed in ocean sanctuaries, so long as these activities are carried out in accordance with "sound conservation practices."<sup>80</sup> Although these sanctuaries have not been effective as MPAs, they have stopped some conflicting proposals, including oil and gas pipelines, sewage treatment plant outfalls, electrical energy cables, and oceanic windmill farms.<sup>81</sup>

DEM also administers the Areas of Critical Environmental Concern (ACEC) Program, a regulatory effort created in 1975.<sup>82</sup> As of 1998, there were more than 25 sites encompassing 170,000 acres. Of these, 14 are coastal and comprise 75,000 acres, including some intertidal as well as submerged lands.<sup>83</sup> They are defined as "areas within the Commonwealth where unique clusters of natural and human resource values exist and which are worthy of a high level of concern and protection."<sup>84</sup> Once designated, higher levels of environmental review are applied to them in order to conserve and protect their ecological and social value.

The ACEC designation process starts with a nomination that can come from a group of 10 citizens or from town officials, state or regional agency officials, or the governor.<sup>85</sup> To be eligible for ACEC nomination, an area must contain attributes of four or more of eleven listed features. Among these are



several marine or estuarine areas features including: 1) "fishery habitats" which is limited to "anadromous/catadromous fish runs, fish spawning areas, fish nursery areas, or shellfish beds"; 2) "coastal features" which includes "barrier beach system, beach, rocky intertidal shore, or dune"; 3) "estuarine wetlands" which lists "embayment, estuary, salt pond, salt marsh or beach"; 4) "habitat resources" covering habitat for threatened or endangered plant or animal species, habitat for species of special concern, or other significant wildlife habitat"; and 5) "special use areas" described as undeveloped or natural areas, public recreation areas, or significant scenic site.<sup>86</sup> Once the secretary accepts the nomination,<sup>87</sup> a public review process is undertaken, leading to a final decision on designation. Once designated, sites are periodically reviewed.<sup>88</sup> After one year, designations can also be repealed or amended.<sup>89</sup>

DEM also administers a parks and reserves program to promote conservation and public recreation opportunities. Although mostly terrestrial areas with some beaches and rocky outcroppings at this time, nothing in the statute appears to exclude estuarine or marine sites from consideration. The statute also outlines three basic points of policy for this program. First, "so far as practicable," sites should "be preserved in their natural state." Second, "so far as possible" they should be "collectively self-supporting;" and third, "no commercial activities except those essential to the quiet enjoyment of the facilities by the people shall be permitted."<sup>90</sup> Such statutory policies are completely harmonious with MPA approaches.

Currently, however, Massachusetts has no state underwater parks or reserves. There are only 12 terrestrial sites adjacent to the sea such as beaches, sand dunes, woodlands, islands, and rocky outcroppings whose boundaries may include the intertidal zone.<sup>91</sup> Several encompass salt marsh areas such as Demarest Lloyd State Park in Dartmouth, Ellisville Harbor State Park in Plymouth, Horseneck Beach State Reservation in Westport Point, and South Cape Beach State Park which is also part of the Waquoit Bay National Estuarine Research Reserve.

Sites can be designated by DEM staff or the public.<sup>92</sup> Their purpose is to protect the best examples of Massachusetts species and communities on DEM property, as well as to promote environmental education, research, and the opportunity for a wilderness experience that provides "solitude and scenery."<sup>93</sup> To achieve this end, a number of use restrictions apply once the sites are established. These include a prohibition on motorized vehicles and on the destroying or collecting of geologic materials, vegetation, wildlife, or aquatic organisms. Hunting, fishing, and trapping can continue, however, if they were lawful prior to the designation.<sup>94</sup>

#### **Department of Environmental Protection**

Tasked with issues related to the environmental quality of the state's air, water and lands, this agency is divided into multiple bureaus and divisions. Among these is the Bureau of Resource Protection, the agency assigned to identify and protect key coastal water resources as well as maintain public waterfront access. Although few of these programs use new designations to pro-

tect priority coastal areas, all of them contribute to the conservation and protection of the state's tidewaters. In addition, most have special provisions that recognize regulatory protected area designations administered or identified by other agencies, such as ACEC's significant habitats, estimated habitats, and for upland areas "priority habitats" protected under the Massachusetts Environmental Policy Act (MEPA).

The administration of a system of water quality classifications that determines the permissible level of pollutant discharge allowed into a water body is also fundamental to this agency's mission. "Outstanding Resource Waters", must be maintained and protected due to their "outstanding socio-economic, recreational, ecological and/or aesthetic values."<sup>95</sup> No new or increased direct discharges are allowed into these waters.<sup>96</sup> There are just under 30 marine or estuarine waters listed as "outstanding" in the state.<sup>97</sup>

Also significant to the management of marine waters is the department's licensing authority over activities on public trust lands (including intertidal, filled intertidal, and subtidal areas) such as construction, fill, dredge, and other projects under its Waterways Act, also referred to as Chapter 91.<sup>98</sup> For some activities in certain coastal areas, this law also works in partnership with the Wetlands Protection Act,<sup>99</sup> which enlists the DEP in a process involving municipal protection of coastal wetland resources (see "estimated habitat" above).

#### **Massachusetts Coastal Zone Management Office**

Unlike the regulatory agencies above, the role of this agency is primarily policy development, planning, and technical assistance.<sup>100</sup> Its stated mission is "to provide policy leadership, assistance, and education to the network of agencies, communities, and individuals who are collectively responsible for the stewardship of coastal resources, in order to promote well-informed decisions, protect the integrity of natural systems, and respond effectively to human needs." In carrying out this mission, the MCZM is involved in several MPA-related activities. It administers the National Estuary Program in Massachusetts Bay. It also provides technical assistance to DEM in its designation of coastal ACECs.<sup>101</sup> Most recently, this office has also received federal funding to explore the development of research reserves within Massachusetts Ocean Sanctuaries.<sup>102</sup>

#### **Massachusetts Board of Underwater Archeological Resources**

As part of its authority to protect artifacts of historical significance or value, the Board of Underwater Archaeological Resources is authorized to designate underwater archaeological preserves. Their purpose is "to recognize and protect those resources of substantial archaeological and/or historical value."<sup>103</sup> Permits for the exploration and extraction of archaeological resources may not be granted in underwater archaeological preserves and any disruption of the sites is prohibited.<sup>104</sup> Although access is guaranteed for recreational, scientific, and historical purposes, collecting is not to be allowed except for scientific or historical purposes. And even these artifacts remain the permanent property of the state.<sup>105</sup> To date, however, no such reserves



have been created.<sup>106</sup> One site that contains the sunken *U.S.S. New Hampshire*, however, is under preliminary consideration for preserve status.<sup>107</sup>

There are a number of potential avenues for MPA establishment in Massachusetts among a variety of state agencies and possibly even municipalities. Currently the biggest hurdle to utilizing these laws is the lack of any obvious state interest in or support of the MPA concept. Although the state has had a "sanctuary" act for the sea for almost 20 years, it has done little to promote the MPA concept as evidenced by the relatively small number of sites under other designations. Neither has the presence of a National Marine Sanctuary sparked noticeable interest in a system of protected areas. Only the state's Coastal Zone Management Office appears to have an official intent to explore the role of marine reserves in these well-used waters. Whether this study will catalyze broader interest within the EOEA or the agencies it houses is yet to be seen.

### **New Hampshire**

Stretching seaward from its 18 miles of coastline, New Hampshire claims the smallest amount of submerged acreage of the three Gulf of Maine states. Totalling just 97.8 square miles of tidal wetlands, estuaries, and submerged lands, the area includes the state's three major harbors—Portsmouth/Little Harbor, Rye Harbor, and Hampton/Seabrook Harbor—17 coastal towns, and the Great Bay and Little Bay estuaries.

Activities within all these areas predominantly fall under state jurisdiction. Although municipalities have a role in some of the

state processes that permit certain uses in marine and intertidal areas, the towns do not own marine or intertidal lands that are either adjacent to or within their town boundaries.<sup>108</sup> Nor do they have any original authority to exclude marine or intertidal uses that occur within town boundaries.

### **Public Trust Doctrine**

New Hampshire distinguishes itself from Maine and Massachusetts by defining the geographical extent of public ownership of coastal shorelands to the mean high tide mark.<sup>109</sup> As a result, almost all areas subject to the ebb and flow of the tide, whether navigable or not, are held in trust by the state for the public's benefit.<sup>110</sup> In New Hampshire, this means that the public has a right of use "for all useful and lawful purposes, to include recreational purposes, subject to the provisions of municipal ordinances relative to the 'reasonable use' of the public trust shorelands."<sup>111</sup> Recently the court has interpreted these "useful and lawful purposes" to include recreation, boating, bathing, fishing, hunting, skating, and ice-cutting.<sup>112</sup>

Governing the use of all these lands and waters are a complex of state statutes and regulations for fishing, environmental protection, port development, and other uses that are spread over several agencies. New Hampshire does not have MPA-enabling legislation. But there are several other laws that provide related protection and conservation programs that may provide some of the benefits of MPAs. The state already has a handful of modest protected sites unintentionally created adjacent to terrestrial protected areas.

The Boston Globe  
January 10, 1981

KING ON THE COAST

Edition: FIRST  
Section: EDITORIAL PAGE  
Page: ?????

Article Text:

In those sky's-the-limit, go-for-broke days in the late 1960s, Logan Airport was thrusting runways and taxiways out over the flats along the northern edge of Boston Harbor. There were days, back then, when the fill-loaded dump trucks rumbled through East Boston with barely a midnight breather. It seemed as if all the highway, shopping mall and office construction sites in the state could not provide enough sand and gravel to complete the grand dreams of Massport; there was talk of sending dredges out off the coast and scooping up the sea bottom.

Edward J. King was the earth-mover at Massport in those days, and for the environmentalists he was public-enemy-number-one. Now, as governor, he has yet to receive any environmentalist-of-the-year awards, but in one area at least, King fully deserves one.

There is a touch of irony in the story. To combat King the earth-mover, the environmentalists, furious but powerless at the relentless filling of salt marshes and tidal flats to build longer runways for louder jets, got an Ocean Sanctuary Law through the Massachusetts Legislature. It was one of those first-in-the-nation laws, designating virtually all the state's coastal waters as sanctuaries and within them prohibiting the mining of sand and gravel, the dumping of contaminated dredge materials and other hazardous wastes, and the laying of oil and gas pipelines.

Most of the offshore waters within three miles of the coast are now

contained within five sanctuary areas, and Massport has long since shortened its horizons. But the state law, restricted by its three-mile limit, leaves unprotected much of Nantucket Sound, a vast 160-square mile area lying between Cape Cod, Martha's Vineyard and Nantucket.

It is a treacherous area of fogs and unpredictable winds, of shoals and tide rips. Once committed to a passage through the Sound, note the authors of the local cruising guide, "one must be prepared to keep going." It was during a sudden squall somewhere out in the Sound that Queequeg first proved his mettle in the quest for Moby Dick, rescuing a sailor who had been dashed overboard when the weather-sheet parted on the main boom. "From that hour," said Ishmael, "I clove to Queequeg like a barnacle; yea, till poor Queequeg took his last long dive."

Today, the Sound is where the cod and haddock come to spawn, and it is a good fishing ground for the New Bedford draggers; some sport fishermen claim it is the best place to go for Blues.

Given the memory of the trucks lumbering out to fill Bird Island Flats, what should you have expected Edward J. King, now governor, to have done? Drilled an oil well off Cross Rip Shoal, in the middle of Nantucket Sound? Set up a gravel-mining operation off Handkerchief Shoal? To the surprise of some, and to the future delight of many, he has endorsed the nomination of the area of the Sound unprotectable by the state law, as a federal marine sanctuary.

Taken alone, this action would stand as a significant step toward the protection of the environment. If the nomination is accepted, nobody will be able to sneak a pipeline down Nantucket Sound from the oil exploration tracts on Georges Bank, or turn the Sound into a hazardous waste dump site. It will remain as a rich spawning ground for groundfish - and the challenges to the navigator will be only those designed by nature.

The real significance of the federal nomination, however, is that it is merely the latest in a series of actions taken by the King administration aimed at protecting the Massachusetts coastline: that one natural resource that is the unique object of envy by other states.

Over the past year, Gov. King, by executive order or through one or another of the environmental affairs agencies, has adopted policies that will protect the fragile barrier beaches and the dunes that lie behind them from further construction, acquired several hundred acres of coastline including the South Cape barrier beach and the promontory of Halibut Point. Just last month King set in motion the drafting of tight restrictions on the use of off-road vehicles on state lands. Both the state regulations, and similar ones being considered by the federal government for the Cape Cod National Seashore, are needed to prevent the destruction of the dunes by the slicing, tearing action of dune-buggy wheels.

The groundwork for many of these actions were, to be sure, laid during the environmentally-minded administration of Gov. Dukakis; but many of those on the Sierra-Audubon-Wildlife axis who enjoyed ready access to Dukakis feared that King, with his pro-business and pro-development orientation, would put many of those initiatives on the back-burner, if not scrap them altogether.

Environmentalists hardly imagined that such projects would be moved



along to completion by the King administration, and that several new actions would be initiated - including the attempt to give the Coastal Zone Management agency responsibility for a heightened level of environmental protection for the Boston Harbor Islands, an action which has drawn criticism from the utilities and other business interests.

Environmental Affairs Secretary John Bewick, CZM Director Edward Reilly, and other state environmental officials have come up with partial explanations for each of these actions. As one story goes, King's enthusiasm for barrier beach protection (accomplished by placing restrictions on the building of summer cottages, jetties, and the like) was sparked by the personal recollection of the governor's own family's summer cottage at Beachmont in Revere being washed away during a northeaster in the 1930s.

Gov. King's overall attitude on the environment is far from complete - the administration's record on the tougher issues of hazardous waste disposal and air pollution control are still far from certain. The King administration's valuable and welcome actions in defense of the coast taken over the past year will stand by themselves.

**PRESS ADVISORY**

**CONFIDENTIAL**

This is an internal report for CLF staff only.

**NOTES ON CAPE WIND DEIS:**

**During installation:**

**Wildlife summary:** localized and temporary effects during construction/installation on the sea bed analogous to a storm. Pile driving will be a loud event above and under water. Seals will need to be frightened off by tapping on piles before louder driving happens. No significant impact on fishery or fishing industry. No effect on whales, are there are few in Nantucket sound. Under-water noise created by pile driving will still be below "danger" standards. Some restrictions on boating during installation.

**During operation:**

**Fishing:** DEIS says Horseshoe Shoal is area of "low activity" for fishing, even though there are claims that 165 fishermen make 50% of their living there. Still, DEIS says no significant impact on fishery or fishing.

**Marine Mammals:** No significant effect on marine mammals. Few whales in Nantucket sound. It's too shallow for them and there is not a good food supply. Mostly Grey and Harbor Seals live there. They should return after installation. Once in operation, noise from turbines should be un-detectable just a short distance away.

**Birds:** Enormous number of birds, enormous amount of data available. Any new structure imposes some added risks. But, only 1% of all birds on shoal fly at rotor height. Those are almost all gulls. Study showed Rosette Terns hug the coast during migration - only come out to shoal for fishing and foraging which took place below rotor height of 35 feet. Not expected to be affected. Plovers are shore birds that would not travel that far out to sea. Forty-thousand Long Tail Sea Ducks observed in the shoal - all flying below 35 feet. Problem is the gulls. They sometimes fly at 35 feet and they are not shy of strange things - in fact they assume something new/human is a food supply. They're usually right.

**Economics:** DEIS claims that without subsidies, when you factor in all the costs of the project (including de-commissioning) it will create a per kilowatt hour cost of \$.09. This is about twice the cost of a non-upgraded coal-fired plant, but about the same as modern plants being built today, especially when the cost of gas is high. Cape Wind fears this will be used by the Alliance against the project, but we believe the message is: the project is commercially viable; the specific economics are the developer's problem.

**Tourism:** the wind park will not harm tourism and may increase it very slightly.

**Real Estate:** no effect on real estate.

**Navigation:** FAA already approved it for aviation. No problem seen for sea navigation - but DEIS says there are some people who will still perceive it as a problem.

**Aesthetics:** The DEIS includes lots of simulated photos showing the wind park from all angles, from land and sea, in "the worst case scenarios" meaning clearest day, most direct sun, etc. The photos portray the turbines as very visible. The most disturbing images are at night. FAA approval is contingent upon every turbine having two lights, in case one should be blocked by a rotor and any given second. The interior turbines will have "low intensity" lights, still quite visible. Every other exterior turbine will have a "medium" intensity light - apparently quite a change from a completely dark night sky over the ocean. DEIS says the flashing red lights will create a visual change.

**Positive Statements:** Wind Park will provide improved air quality, possible economic benefits.

**For more information contact:**

Julia Bovey, Communications Director  
jbovey@clf.org

(617) 350-0990, HYPERLINK "mailto:jbovey@clf.org"

# **ESS** ENVIRONMENTAL SCIENCE SERVICES, INC.

ENVIRONMENTAL SCIENTISTS, ENGINEERS, AND PLANNERS

September 4, 2001

Mr. Brian E. Valiton  
U.S. Army Corps of Engineers  
696 Virginia Road  
Concord, Massachusetts 01742

**Re: Cape Wind Associates, LLC  
Proposed Renewable Energy Project, Nantucket Sound, Massachusetts  
ESS Project No. E159-000**

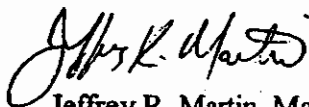
Dear Mr. Valiton,

In response to your request, Environmental Science Services, Inc. (ESS) is pleased to provide the enclosed information regarding the renewable energy project proposed by Cape Wind Associates, LLC. Specifically, we are providing two (2) copies each of a brief project description and relevant figures illustrating the proposed Project. Please note that although the information provided herein is representative of the Project as it has developed to date, minor revisions and/or modification may be made in the coming weeks, particularly with respect to wind turbine size and design, and identification of the preferred submarine cable route and landfall site.

It is our understanding that you will review this information in preparation for our scheduled meeting of September 14, 2001 at your offices in Concord, MA. We also understand that you will likely distribute additional copies of this information for internal review by others. To reiterate, we have requested the September 14 meeting in order to discuss the Proponent's regulatory filing strategy and schedule. We are particularly interested in discussing and identifying the USACE's role in the federal NEPA review process, and would like to present our thoughts and suggestions regarding state and federal agency review and coordination.

If you have any questions regarding the enclosed information, please do not hesitate to contact the undersigned at (781) 431-0500 ext. 103, or Terry Orr at ext. 190. Otherwise, we will await your confirmation of time and place for the September 14 meeting. Thank you very much for your time and efforts.

Sincerely,



Jeffrey R. Martin, Manager  
Land Development and Coastal Services

000071

Cc: Eric Hutchins, National Marine Fisheries Service  
File

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REGULATORY DIVISION



## PROJECT DESCRIPTION

Cape Wind Associates, LLC proposes to construct a renewable energy project on Horseshoe Shoal, in Nantucket Sound. The Project consists of approximately 156 turbines (WGM, wind turbines) that will utilize wind power to generate electricity. Each turbine will utilize rotors having a maximum diameter of 100 meters, and is expected to generate up to 2.7 megawatts of electricity. The 156-turbine array will be located entirely within the federal waters of Nantucket Sound (see Figures 1 and 2 attached). The northern edge of the turbine array will be no less than 3 nautical miles from the nearest landform (Point Gammon). Most of the individual turbines will be more than 4 nautical miles from any landform.

The electricity generated from each turbine will be transmitted to an electrical service platform (or hub) centrally located within the proposed turbine array. The electricity produced will then be transmitted from the electrical service platform to shore by means of a 115 kV submarine cable. Upon reaching landfall the submarine cable will connect to an upland transmission cable that will ultimately interconnect to the regional electric power transmission grid on Cape Cod. Potential submarine cable landfall sites in Mashpee and Yarmouth have been identified and are being assessed for technical and environmental suitability. Landfall sites presently being studied are located in the vicinity of Popponesset Bay (Mashpee), and Lewis Bay (Yarmouth). The preferred landfall site is expected to be selected and presented in the MEPA Environmental Notification Form (ENF) and U.S. Army Corps of Engineers Individual Permit Application (to be filed in late October 2001).

In order to make the most efficient use of wind resources in Nantucket Sound, wind turbines will be arranged in rows that follow a northwest to southeast alignment. This alignment will position the turbines perpendicular to prevailing winds. Turbines will also be designed to articulate, allowing each turbine to pivot into the wind for optimal generation.

Turbines must be sufficiently spaced in order to minimize power losses associated with "wake effects." Because each turbine deflects air as it passes through its rotors, wind is slowed and made turbulent on the downstream side. A certain distance between rotors is required, therefore, to regain wind speed and linear flow. Based on a detailed assessment of the foregoing, the proposed turbine array has been configured to provide a distance of approximately 560 meters (1,837 feet) between turbines within each row, and approximately 880 meters (2,887 feet) between rows. Further refinements may be made to final design and turbine spacing due to geophysical conditions at the site, or in an effort to minimize environmental impacts.

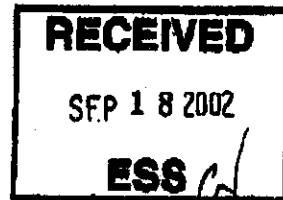
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DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT CORPS OF ENGINEERS  
696 VIRGINIA ROAD  
CONCORD, MASSACHUSETTS 01742-2781

REPLY TO:  
ATTENTION OF:

September 6, 2002



Charles J. Natale Jr.  
Senior Vice President and Managing Principal  
Environmental Science Services, Inc  
888 Worcester Street  
Suite 240  
Wellesley, Massachusetts 02482

Dear Mr. Natale;

As Environmental Science Services (ESS) is providing much of the information needed for the Environmental Impact Statement through the preparation of a joint Environmental Impact Report/Environmental Impact Statement, we would like to have ESS provide a statement to assure us that ESS has no financial or other interest in the outcome of the project. If this is correct, please sign and return the statement below as soon as possible.

Sincerely,

Christine A. Godfrey  
Chief, Regulatory Division

I hereby certify under the pains and penalties of perjury, that ESS has no financial or other interest in the outcome of the project proposed by Cape Wind Associates, permit application number 200102913, beyond providing environmental consulting services on a time and materials basis.

Signature

date

CHARLES J. NATALE, JR. SENIOR V.P.  
Name (printed) and title



**RARE SPECIES:** Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities? ☐ Yes (Specify: ) ☒ No

**HISTORICAL/ARCHAEOLOGICAL RESOURCES:** Does the project site include any structure, site or district listed in the State Register of Historic Place or the Inventory of Historic and Archaeological Assets of the Commonwealth? ☐ Yes (Specify: ) ☒ No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☐ Yes (Specify: ) ☒ No

**AREAS OF CRITICAL ENVIRONMENTAL CONCERN:** Is the project in or adjacent to an Area of Critical Environmental Concern? ☐ Yes (Specify: ) ☒ No

**PROJECT DESCRIPTION:** The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative. (You may attach one additional page, if necessary.)

a) The 11.0± acre property on which the project will be constructed abuts Southbridge Street and is approximately 120 feet west of the intersection of Southbridge Street and Warren Road. It is a mostly wooded parcel draining from south to north, away from Southbridge Street and towards the Dark Brook Reservoir. An existing 36" diameter culvert discharges drainage from Southbridge Street onto the property. This drainage meanders through the wetlands becoming channelized before reaching the Dark Brook Reservoir. The channelized intermittent stream has an associated 100 year flood plain.

An 81 room hotel is to be constructed on a large pocket of upland area at the northern end of the site. Construction of a 5,100 s.f. restaurant will occur on the upland area abutting Southbridge Street. Access to the hotel will require a driveway crossing the BVW.

The site is located within the Town of Auburn's Highway Business (HB) zoning district. Development of the site will be in accordance with the Zoning By-law.

b) Four alternative means of access to the upland area were studied. Among the alternatives studied were: access from abutting properties (off site alternative), a 24' wide access drive with 1 to 1 side slopes, a 300' long bridge and a 22' wide access drive with retaining walls. The 22' wide access drive alternative is the preferred alternative.

The alternative with access to the upland from abutting properties would have the least wetlands impact. It is, however, not viable. Abutting property owners have been unwilling to negotiate for granting the required access. The 24' wide access drive with 1 to 1 side slopes would impact 17,659 square feet of BVW. The bridge alternative will fill 2,583 square feet of BVW and will impact an additional 4,800 square feet of BVW due to light deprivation. The 22' wide access drive with retaining walls would impact 1,494 square feet of BVW.

c) Each of the alternatives would entail wetlands replication on a 1 to 1 ratio as mitigation.

Commonwealth of Massachusetts  
Executive Office of Environmental Affairs ■ MEPA Office

## ENF Environmental Notification Form

For Office Use Only  
Executive Office of Environmental Affairs  
BOEA No.: 124 H3  
MEPA Analytical Review: Positive  
Phone: 617-626-1029

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Cape Wind Project	
Street: Nantucket Sound and 43 Shore Road, Yarmouth	Watershed: Cape Cod
Municipality: Barnstable, Yarmouth,	
Nantucket Sound	
Universal Transverse Mercator Coordinates: NAD83	Latitude: 41° 30.50 minutes Longitude: 70° 19.13 minutes
Estimated commencement date: April 2004	Estimated completion date: September 2005
Approximate cost: \$650-700 Million	Status of project design: 15 % complete
Proponent: Cape Wind Associates, LLC c/o Mr. Leonard Fagan	
Street: 75 Arlington Street, Suite 704	
Municipality: Boston	State: MA Zip Code: 02116
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Terry Orr	
Firm/Agency: Environmental Science Services Inc.	Street: 888 Worcester Street, Suite 240
Municipality: Wellesley	State: MA Zip Code: 02482
Phone: (781) 431-0500 ext. 190 Fax: (781) 431-7434	E-mail: <a href="mailto:tom@essgroup.com">tom@essgroup.com</a>

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.09)? ☐ Yes ☒ No

Has this project been filed with MEPA before? ☐ Yes (EOEA No. ) ☒ No

Has any project on this site been filed with MEPA before? ☐ Yes (EOEA No. ) ☒ No

Is this an Expanded ENF (see 301 CMR 11.09(7)) requesting: Yes ☐ No ☒ No

a Single EIR? (see 301 CMR 11.09(e)) ☐ Yes ☒ No

a Special Review Procedure? (see 301 CMR 11.09) ☐ Yes ☒ No

a Waiver of mandatory EIR? (see 301 CMR 11.11) ☐ Yes ☒ No

a Phase I Waiver? (see 301 CMR 11.11) ☐ Yes ☒ No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres). None. The Project will be 100% privately financed.

Are you requesting coordinated review with any other federal, state, regional, or local agency? ☒ Yes (Specify: Cape Cod Commission/VUSACE-NED) ☐ No

List Local or Federal Permits and Approvals: USACE - Section 10/404 Individual Permit; Massachusetts Coastal Zone Management - Federal Consistency Certification; Cape Cod Commission - Development of Regional Impact (DRI) Review; FAA Notice of Proposed Construction or Alteration; Yarmouth and Barnstable Conservation Commission Review; Town of Yarmouth Street Opening Permit

Which ENF or EIR review threshold(s) does this project meet or exceed (see 301 CMR 11.03):

☐ Land ☐ Wetlands, Waterways, & Tidelands  
☐ Water ☐ Transportation  
☒ Air ☐ Solid & Hazardous Waste  
☐ Energy ☐ Historical & Archaeological  
☐ ACEC ☐ Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
LAND				
Total site acreage	.32			<input checked="" type="checkbox"/> Order of Conditions
New acres of land altered		.11		<input type="checkbox"/> Superseding Order of Conditions
Acres of impervious area	0	0	0	<input checked="" type="checkbox"/> Chapter 91 License
Square feet of new bordering vegetated wetlands alteration		0		<input checked="" type="checkbox"/> 401 Water Quality Certification
Square feet of new other wetland alteration		278,785		<input checked="" type="checkbox"/> MHD or MDC Access Permit
Acres of new non-water dependent use of tidelands or waterways		0		<input type="checkbox"/> Water Management Act Permit
STRUCTURES				
Gross square footage	NA	NA	NA	<input type="checkbox"/> New Source Approval DEP or MWRA
Number of housing units	NA	NA	NA	<input type="checkbox"/> Sewer Connection/Extension Permit
Maximum height (in feet)	NA	NA	NA	<input checked="" type="checkbox"/> Other Permits (including Legislative Approvals) - Specify: Massachusetts Energy Facility Siting Board - Certificate of Environmental Impact and Public Need.
TRANSPORTATION				
Vehicle trips per day	NA	NA	NA	
Parking spaces	NA	NA	NA	
WATER/WASTEWATER				
Gallons/day (GPD) of water use	NA	NA	NA	
GPD water withdrawal	NA	NA	NA	
GPD wastewater generation/treatment	NA	NA	NA	
Length of water/sewer mains (in miles)	NA	NA	NA	

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 87 public natural resources to any purpose not in accordance with Article 97?

☐ Yes (Specify: ) ☒ No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐ Yes (Specify: ) ☒ No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☒ Yes (Specify: See attached NHESP Map ) ☐ No

HISTORICAL/ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☐ Yes (Specify: ) ☒ No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐ Yes (Specify: ) ☒ No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐ Yes (Specify: ) ☒ No

PROJECT DESCRIPTION: The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative (You may attach one additional page, if necessary.)

The offshore wind energy project being proposed by Cape Wind Associates, LLC (the "Proponents" or "Cape Wind Associates") consists of the installation and operation of 170 Wind Turbine Generators (WTGs) on Horseshoe Shoal in Nantucket Sound. The WTGs will produce up to 420 megawatts (MW) of clean renewable energy using the natural wind resources off the coast of Massachusetts. Wind-generated energy produced by the WTGs will be transmitted to the mainland electric transmission system via a submarine cable interconnection to a selected landfill site in Yarmouth, Massachusetts. The submarine cable system will then interconnect with an overland cable system installed underground within existing public rights-of-way (ROWs) and roadways in the Town of Yarmouth where it will interconnect with an existing NSTAR 115 kV electric transmission line. The clean renewable energy produced by the Wind Park will be transmitted by this cable system to the electric transmission system serving Cape Cod and the Islands and the New England region.

The Project will provide numerous benefits to Cape Cod and the Islands through improved air quality conditions, significant reduction of greenhouse gases, the creation of year-round jobs, the facilitation of technology transfer, and reduction in electricity costs to ratepayers. Preliminary energy production estimates for the Project suggest that production will coincide with the electricity demands of Cape Cod and the Islands. During the Summer months, production will be greatest during the late afternoon and early evening hours when consumption is at its peak. A similar pattern, although less pronounced, is expected for the other seasons. The presence of a large generating source relatively close to the demand centers on the Cape and Islands should have the effect of reinforcing the regional electricity grid.

The Project will help Massachusetts reduce its dependency on foreign oil or other natural resources presently used to produce energy in the New England region. By using a domestic, non-polluting and inexhaustible fuel source, the Project will displace approximately 170 MW of production which would otherwise be based on the burning of fossil fuels. Current forecasts for New England show severe capacity restraints for natural gas at the end of the decade. As the vast majority of new plant installation through the year 2010 is slated to be based on natural gas, this signals a looming regional energy crisis. The Project will help the Cape and Islands and the rest of Massachusetts to become more energy self-sufficient by utilizing an untapped and abundant local resource. Because there is no fuel cost component for the life of the Project, the cost of energy is fixed at financial close, thereby creating a natural hedge against oil and gas price spikes. The long-term savings to New England ratepayers is estimated to be over \$800 MM over the estimated 20-year design life of the Project. The Project will also provide a unique opportunity for the Commonwealth of Massachusetts to lead the national energy initiative by hosting a large scale renewable energy project.

As described in the Expanded ENF, the Proponent has conducted a thorough analysis of alternative site locations for the proposed Project, considering both land based and offshore locations in southeastern Massachusetts. The results of this analysis show that the preferred location of the proposed Wind Park is in the offshore areas of Horseshoe Shoal in Nantucket Sound. Nantucket Sound was selected for the siting of the Wind Park due to several factors including relatively shallow waters, proximity to shore, and a consistent high energy, low turbulence wind resource. The proposed site also has sufficient available water sheet area to accommodate the Project and allow the continuation of existing water sheet uses, and is ideally located for the submarine cable interconnections to the mainland. After review of several potential site areas in Nantucket Sound, it was determined that Horseshoe Shoal provided the most suitable geographic location and physical characteristics for installation and operation of the proposed Wind Park.

During the Spring and Summer of 2001, Cape Wind Associates conducted extensive field studies in Nantucket Sound, Horseshoe Shoals, and the Cape Cod shorelines from Mashpee to Yarmouth. The purpose of these studies was to fully evaluate existing geological and oceanographic conditions on Horseshoe Shoal as well as to evaluate the potential environmental effects of the Project. Field investigations and studies were also conducted to identify and evaluate potential submarine cable routes, landfall locations, and overland cable routes for the interconnection of the Wind Park to the existing NSTAR electric transmission system servicing Cape Cod and the Islands. The studies and investigations indicate that construction and operation of the Wind Park will not result in any significant adverse environmental effects to existing seabed conditions, aquatic resources, and avian communities on Horseshoe Shoal. The Project has also been planned and designed to minimize potential impacts to commercial and recreational fishing activities and navigation. Construction of the Wind Park will utilize low-impact construction techniques such as monopile foundation systems, jet-pile embedment of submarine cable systems, horizontal directional drill methodologies at the cable landfall locations, and underground construction of the upland cable system. All feasible and practicable measures to avoid or minimize potential impacts to the environment have been incorporated into the Project design and operation.

The results of the above mentioned studies and investigations are presented in the Expanded ENF and indicate that the proposed Project will result in net positive environmental effects. The proposed Project will be a clean renewable energy facility that can deliver up to 420 MW of electric power serving the needs of Cape Cod and Islands and Massachusetts users. Operation of the Wind Park will result in significant reductions in air pollutant emissions from fossil fuel-burning plants presently servicing the New England region and producing the equivalent electric energy dispatched to the New England region and Cape Cod. Therefore, regional air quality conditions will be measurably improved by construction of the Project as well as a significant reduction in the production of greenhouse gases presently produced by fossil fuel-burning power plants serving New England.

Commonwealth of Massachusetts  
Executive Office of Environmental  
Affairs ■ MEPA Office

# ENF

## Environmental Notification Form

For Office Use Only  
Executive Office of Environmental Affairs  
EOEA No.: 12644  
MEPA Analyst: Bill Gage  
Phone: 617-626-1025

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: The Brigham and Women's Hospital, Inc., - Center for Advanced Medicine	
Street: 68 Francis Street	Watershed: Charles River
Municipality: Boston	Latitude: 42°33'58"N
Universal Transverse Mercator Coordinates: NAD27 326449.95E 4689173.77N	Longitude: 71°10'06"W
Estimated commencement date: Winter 2002	Estimated completion date Spring 2005
Approximate cost: \$175 million	Status of project design: 5% complete
Proponent: The Brigham and Women's Hospital, Inc.	
Street: 75 Francis Street	
Municipality: Boston	State: MA Zip Code: 02115
Name of Contact Person From Whom Copies of this ENF May Be Obtained: M. Cristina Warren	
Firm/Agency: Epsilon Associates, Inc.	Street: 150 Main Street
Municipality: Maynard	State: MA Zip Code: 01754
Phone: 978.897.7100 Fax: 978.897.0099	E-mail: cwarren@epsilonassociates.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.00)?

☐ Yes

☒ No

Has this project been filed with MEPA before?

☐ Yes

☒ No

Has any project on this site been filed with MEPA before?

☐ Yes

☒ No

Is this an Expanded ENF (see 301 CMR 11.05(n)) requesting:

a Single EIR? (see 301 CMR 11.06(i)) ☐ Yes

a Special Review Procedure? (see 301 CMR 11.06) ☐ Yes

a Waiver of mandatory EIR? (see 301 CMR 11.11) ☐ Yes

a Phase I Waiver? (see 301 CMR 11.11) ☐ Yes

☒ No

☒ No

☒ No

☒ No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres):

It is anticipated that HEFA funding will be utilized.

November 21, 2001

Ms. Karen Adams  
Chief, Permitting Division  
United States Army Corps of Engineers, New England District  
696 Virginia Road  
Concord, Massachusetts 01742-2751

**Re:   *Application of Cape Wind Associates, LLC for US Army Corps Approval of  
The Cape Wind Project, Nantucket Sound and Yarmouth, Massachusetts  
ESS Project No. E159-009***

Dear Ms. Adams:

On behalf of Cape Wind Associates, LLC., Environmental Science Services, Inc. (ESS) is pleased to provide you with the attached Individual Permit Application, project plans, and supporting documentation for the proposed Cape Wind offshore wind energy project.

This application package contains the following information:

- Application for Department of the Army Permit (ENG Form 4345), Project Description, and Project Plan Set
- Alternatives Analysis
- Environmental Effects Assessment
- Section 404(b)(1) Compliance Assessment
- Essential Fish Habitat Assessment
- Endangered Species Act Assessment
- Massachusetts Federal Consistency Certification

As you know, the proposed Cape Wind Energy Project is a clean renewable energy facility sited in the offshore area of Nantucket Sound. The proposed project has the capacity to generate up to 420 megawatts of electric power to serve the needs the Northeastern Region, including Massachusetts, Cape Cod, and the Islands. Cape Wind Associates has conducted extensive technical reviews and field studies over the last twelve (12) months to fully evaluate the best available site for the Project as well as the type and extent of environmental effects. Cape Wind has also conducted extensive agency and public interest group outreach efforts to inform stakeholders of the project and its benefits as well as gather comments and thoughts about this exciting project.

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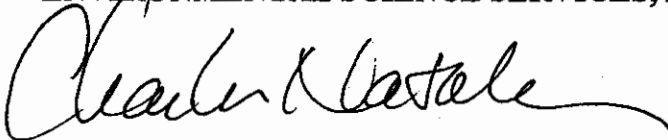


We look forward your review of the Application and commencement of your regulatory permitting process.

If you have any questions or comments on the Application or its supporting documentation, please do not hesitate to contact me at 781 431-0500 extension 105 or by email at [cnatale@essgroup.com](mailto:cnatale@essgroup.com).

Sincerely,

**ENVIRONMENTAL SCIENCE SERVICES, INC.**



Charles J. Natale, Jr.  
Senior Vice President, Managing Principal

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DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
696 VIRGINIA ROAD  
CONCORD, MASSACHUSETTS 01742-2761

REPLY TO:  
ATTENTION OF:

Regulatory Division  
CENAE-R

November 8, 2002

Mr. Douglas P. Yearly  
Alliance to Protect Nantucket Sound  
396 Main Street, Suite 2  
Hyannis, Massachusetts 02601

Dear Mr. Yearly,

This is in response to your August 16, 2002 letter regarding the Corps of Engineers (Corps) Environmental Impact Statement (EIS) for the Cape Wind Associates application to construct and operate a wind power facility on Horseshoe Shoals in Nantucket Sound, Massachusetts.

Specifically, you have raised a concern about the applicant and their consultant's role in the preparation of the EIS. Our approach has been guided by the Council on Environmental Quality's (CEQ) NEPA regulations, 40 CFR 1500-1508, and the Corps of Engineers NEPA Implementing regulations, February 3, 1988, 33 CFR 325 Appendix B (approved by the CEQ).

The CEQ NEPA regulations at 40 CFR 1506.5 state:

(a) *Information* If an agency requires an applicant to submit environmental information for possible use by the agency in preparing an EIS, then the agency should assist the applicant by outlining the types of information required. The agency shall independently evaluate the information submitted and shall be responsible for its accuracy. If the agency chooses to use the information submitted by the applicant in the EIS either directly or by reference, then the names of the persons responsible for the independent evaluation shall be included in the list of preparers. It is the intent of this paragraph that acceptable work not be redone, but that it be verified by the agency.

The Corps NEPA Implementing regulations at 33 CFR 325 Appendix B (8) state:


(f) Contracting (2) Information required for an EIS also may be furnished by the applicant or a consultant employed by the applicant. Where this approach is followed, the district engineer will (i) advise the applicant and/or his consultant of the Corps information requirements, and (ii) meet with the applicant and/or his consultant from time to time and provide him with the district engineer's view regarding the adequacy of the data that are being developed, (including how the district engineer will view such data in light of any possible conflict of interest).

Therefore, both the CEQ regulations and the Corps NEPA implementing regulations provide for the applicant, at the Corps direction and subject to the Corps approval, to furnish information necessary for the EIS. The EIS for this project is the Corps EIS and the Corps is wholly responsible for its content. In fact, the Corps has convened a large list of cooperating agencies, and hired it's own independent consultant to assist in directing the development of information, and its review and approval. The Corps staff, cooperating agency staff, and our independent consultants will be listed in the EIS. As you know the Corps and Massachusetts MEPA Office have agreed to produce a joint EIS/EIR to satisfy both federal and state permit review requirements. The MEPA office developed its independent scope of work for the EIR, and the Corps together with the cooperating agencies refined and added to the scope for the Federal EIS before the Corps issued it. I think its important to reemphasize that any information submitted by the applicant which the Corps decides to use in its EIS, will be fully reviewed by various experts including Corps staff, the cooperating agencies and the Corps independent consultants - and approved by the Corps.

Lastly, the applicant's consultant has provided the Corps a disclosure statement specifying they have no financial interest or other interest in the outcome of the project.

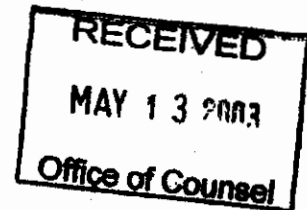
Thank you for your involvement in the process, and I look forward to your continued participation in the preparation of the EIS.

Sincerely,



Thomas L. Koning  
Colonel, Corps of Engineers  
District Engineer

Cape Wildlife Center  
The Humane Society of the United States  
185 Meadow Lane  
West Barnstable, MA 02688



May 5, 2003

Colonel Thomas Koning  
U.S. Army Corps of Engineers  
District Engineers  
New England District  
696 Virginia Road  
Concord, MA 01742-2751

Dear Colonel Koning:

In your letter of February 24, 2003, the U.S. Army Corps of Engineers declined our offer to establish a working group to provide input on the environmental impact statement (EIS) the Corps is preparing for the Cape Wind Project. On behalf of the organizations sponsoring this proposal, I am writing to express our general disappointment with your response and our request for action to remedy the concerns that prompted our initial request.

We presented our proposal in the hope that it would provide an opportunity for the Corps to obtain information that would be beneficial to the review of this controversial project. We strongly believe that there are insufficient data for an accurate evaluation of this application. In addition, it appears to us that the significant role the applicant has been given in the environmental review process may undermine the objectivity and credibility of the EIS. The purpose of our proposal was to counterbalance these concerns to ensure a comprehensive, objective NEPA review.

Please allow us to respond to your justifications for declining our offer.

First, your statement that "the EIS for a specific project will not provide a comprehensive national policy regarding offshore wind projects" seems to suggest that the Corps is underestimating the importance of this offshore wind energy application. The Cape Wind proposal is precedent setting in many respects. It raises important jurisdictional questions over offshore waters for wind projects. Moreover, the EIS the Corps is preparing will become the template for the consideration of all other offshore wind energy proposals throughout the United States. A comprehensive review is therefore essential, but unfortunately, the Corps has not yet committed to a programmatic review of the offshore wind energy program now evolving under the Corps purported jurisdiction.

The Corps' decision to permit the Cape Wind data tower was based on the claim that the Corps has exclusive control over non-oil and gas OCS projects. This, in addition to the Corps' apparent refusal to recognize the need for a programmatic review or the

Colonel Thomas Koning

May 5, 2003

Page Two

importance of the Cape Wind EIS, greatly concerns us. While we disagree with the Corps' jurisdictional assertion, the manner in which your agency handles the Cape Wind project will doubtlessly establish the baseline for future reviews and, therefore, is defining national policy. That seven additional applications have been filed for Massachusetts alone confirms that there is a need for a programmatic review prior to any action the Corps takes on the Cape Wind Project. We believe it is clear that a more open and thorough review is needed.

Your letter also states that "the scope [for the Cape Wind EIS] continues to evolve and changes have been incorporated." We are pleased to learn that the Corps understands that the initial scoping process needs to be enhanced. We are also pleased to learn that you understand that new issues have arisen. However, we are concerned that the Corps has not yet taken the necessary action of formally reopening the scoping process on this EIS. Instead, the only additional opportunity made available to the public has been in the context of the Massachusetts Technology Collaborative (MTC) meeting structure. In addition to our concerns with the MTC process noted below, we believe that the MTC meetings exist outside of the purview of federal agency action, are not part of the Corps record, and do not substitute for our proposed working group or a reopened scoping period.

As your letter implies, the nature of the review of the Cape Wind project has changed dramatically since the Corps initiated scoping in the spring of 2002. Off the coast of Massachusetts alone, there are now a total of eight offshore wind projects proposed. Nearly two dozen projects have been proposed throughout the New England and mid-Atlantic regions. NEPA has been construed by the courts to require flexibility and the reconsideration of initial assumptions in light of changed circumstances. We therefore formally request that the Corps reinstate scoping on this EIS to obtain additional comment on issues such as purpose and need, alternatives, areas of environmental impact, the need for bird studies, and cumulative effects. We also request that the Corps suspend further processing of the EIS until that renewed public review has been completed.

Your letter cites the MTC stakeholder meetings as an opportunity for the Corps to obtain additional input. It is our view, however, that the meetings have been designed to provide information to the public and designated "stakeholders" rather than to collect information from these groups. Moreover, all the appearances are that the MTC process has been skewed in favor of the Cape Wind Project. The MTC itself is charged with the mission of promoting the development of alternative energy in Massachusetts. Thus, as a threshold matter, the MTC does not provide an unbiased or objective forum.

Colonel Thomas Koning  
May 5, 2003  
Page Three

In addition, we have been concerned by the manner in which the MTC conducted the proceedings and the decisions it has made regarding the exclusion of important stakeholders from full participation. For these reasons, we believe the proceedings are no substitute for supplemental scoping or the use of a stakeholder working group. For example, The Humane Society of the United States (HSUS) has not been permitted to participate as a stakeholder in the process, despite our repeated requests. We do not believe that any of the recognized "stakeholders" represent The HSUS's position, and we were frustrated to learn that as the nation's largest animal protection organization, with more than 7 million supporters, our organization is "too controversial" to be included among the stakeholders.

Our concern over the MTC's role is heightened by the fact that in a recent hearing held in the House of Representatives on legislation designed to establish authority for permitting offshore wind projects, the representative of the wind energy association, a private sector business entity, acknowledged that he has worked under contract for the MTC itself. We are troubled by the Corps' reliance upon an industry advocacy organization to serve as the vehicle for developing input and public comments on an EIS.

We also are concerned over the role that Cape Wind and its advocate for the permit, Environmental Sciences Services (ESS), have been allowed to play in the development of this EIS. It appears to us that the record demonstrates that the Corps has not taken the necessary steps to screen the applicant from the preparation of this EIS. Indeed, it is our understanding that ESS has been delegated with the primary responsibility for drafting the EIS. ESS's role appears to have expanded into making fundamental decisions regarding the scope of the EIS and the alternatives to be considered. This is very troubling to us, and our working group proposal was intended to have a balancing effect on the Corps' review. The fact that you have rejected our working group proposal heightens our concern over the validity and objectivity of your NEPA review.

In your letter you state that, "we believe we are taking a broad approach with the scope of alternatives being addressed." Nonetheless, at the MTC meeting, the Corps stated that it is essentially employing the screening criteria developed by Cape Wind itself, and that those criteria would effectively eliminate all alternatives except those handpicked by the developer to meet its economic and profit-making goals. Unfortunately, we see no evidence of a "broad approach" for the selection of alternatives to be considered in this EIS.

In addition, if the Corps is in fact relying upon the MTC process to develop its thinking and analysis, then we are compelled to ask how the agency is complying with the Federal Advisory Committee Act (FACA). 5 U.S.C. App. This law prohibits the use of any advisory committee, unless established as a matter of formal record. If the MTC is



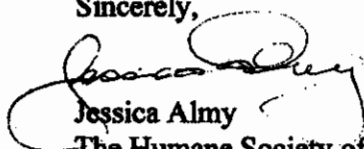
Colonel Thomas Koning  
May 5, 2003  
Page Four

playing the role you ascribe to it, it would appear that FACA has been violated. Our proposal would have avoided that problem by operating under the auspices of the Corps NEPA process.

Your letter states that the Corps "has been reviewing and permitting work in navigable waters since 1899; including a broad public interest review since the 1960's." This assertion is of little comfort to our organizations. We are fully familiar with the nature of the Corps work under section 10 over an extended period of time and are aware that the Corps has never been engaged in the review of a project of this nature. Indeed, expertise on the relevant issues concerning offshore facilities lies with other agencies, such as the National Oceanic and Atmospheric Administration and the U.S. Fish and Wildlife Service. We make this observation not to denigrate the Corps' intentions, abilities, or hard work. Instead, we note it simply for the purpose of observing that your agency is not the appropriate agency to be making judgments involving these resources in offshore locations. In fact, we believe the Corps itself shares this view and is, for that reason, resisting undertaking the programmatic EIS that is clearly required for a new energy program involving new technology and covering a massive geographic scale. We would hope that recognition of this fact would motivate the Corps to accept a proposal, such as ours, which would provide an opportunity to obtain information and analyses from organizations that have devoted their mission statements and programs over an extended period of time to the marine environment, in general, and Cape Cod and Nantucket Sound, in particular.

We hope that you will reconsider your decision to reject our proposal for an independent working group to participate in the EIS process. At the very least, we request that the Corps formally reopen the scoping period on the EIS to incorporate additional public comments based on the dramatically changed circumstances now surrounding the Cape Wind project and other offshore wind proposals in this region and throughout the country and do so in the context of the legally required programmatic review dictated by NEPA and demanded by the practical considerations associated with what is now clearly established nascent federal program for a new energy technology that poses promise for renewable power but also threats for the marine environment. Please address any future correspondence to me at the Cape Wildlife Center, 185 Meadow Lane, West Barnstable, MA 02688. Thank you for considering this request.

Sincerely,



Jessica Almy

The Humane Society of the United States



## Critics hit corps' Cape mill report

By Jay Fitzgerald

Tuesday, November 9, 2004

Opponents vowed yesterday to step up their fight against a giant wind farm off the coast of Cape Cod amid accusations that a new U.S. Army Corps of Engineers study was inadequate and biased toward the developer who paid for it.

"This report does nothing to change (Gov. Mitt Romney's) opposition to the proposed wind farm," said Romney spokeswoman Shawn Feddeman, reacting to yesterday's long-delayed release of the Corps' draft environmental impact study, seen as largely favorable toward the project.

"(Romney) will continue to do everything in his power to prevent this project from happening, and we are exploring our options," said Feddeman.

"The Army Corps of Engineers is disregarding its duty to defend the public interest and, in essence, opening the door to a land rush in one of the commonwealth's greatest national resources," said Attorney General Tom Reilly.

State leaders' criticisms were echoed yesterday by U.S. Sen. Edward M. Kennedy [related, bio] (D-Mass.), who said he has "serious questions" about federal policies toward coastal projects.

A spokesman for the corps said the nearly 4,000-page study, the subject of much rumor and controversy even before it was released yesterday, was "absolutely fair."

The study doesn't take a position on the wind farm proposed by Cape Wind Associates, said corps spokesman Larry Rosenberg, noting it's standard procedure for applicants to pay the costs of a study, rather than taxpayers.

Still, opponents have questioned the corps' use of a California firm - TRC Environmental - to perform an analysis of alternate sites. TRC specializes in speeding wind power projects through the permitting process and could be in line for lucrative consulting work should Cape Wind come to pass.

Environmentalists defended the report - saying it clearly shows the project, while not perfect for the environment, would have less impact compared with other electricity producing power stations.

"Let's not hold the Cape Wind project to an impossible standard of 'no adverse impacts,'" said Philip Warburg, president of the Conservation Law Foundation.

But Ernie Corrigan, a spokesman for the Alliance to Protect Nantucket Sound, said the Corps' report was "clearly biased."

Public hearings will be held on the report, expected to be finalized by next year. The project, which calls for 130 420-foot-tall wind turbines on Nantucket Sound, still needs multiple state permits.

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# SAVE OUR SOUND

alliance to protect nantucket sound

October 25, 2004

Colonel Thomas Koning  
U.S. Army Corp of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01742

Dear Colonel Koning:

On behalf of the Alliance to Protect Nantucket Sound, I am writing in response to the letter from Mr. Dennis Duffy, of the Cape Wind Associates (CWA), dated September 9, 2004. The September 9 letter is the latest in a series of communications to the Corps regarding the role CWA has played in defining the scope and content of the EIS on its proposed private energy plant for Nantucket Sound. The correspondence between CWA and the Alliance addresses the legal question of whether the Corps must defer to the applicant in defining the purpose and need of an EIS and, as an outgrowth of that step, limiting the range of alternatives. While that correspondence has previously been sent to Ms. Karen Adams, I am writing to you now to ensure that this correspondence is brought to your attention. We also request that the Corps bring this important issue to the attention of the appropriate officials at the Department of Defense, where the Draft Environment Impact Statement (DEIS) apparently is under review. As demonstrated by this correspondence, the DEIS is seriously flawed and must be substantially revised before it is released.

The Alliance first discovered that CWA had misrepresented NEPA case law to the Corps, EPA, and the U.S. Fish and Wildlife Service last March through documents released under FOIA. The question at issue was whether the Corps must accept CWA's definition of project purpose and need and definition of what alternatives to consider. CWA argued that the law was clear on this point.

The Alliance promptly prepared a detailed legal analysis on April 26, 2004 that demonstrates how CWA had presented a biased, incomplete presentation of the law. NEPA case law requires an action agency to take a much broader approach to EIS formulation than argued by CWA. The broader role is especially important here where public resources are to be used for private purposes and the agency is applying a broad public interest test.

CWA responded to the Alliance's analysis on May 7, 2004. The Alliance submitted another detailed memorandum on August 6, 2004, again discussing the errors in CWA's approach. The Alliance has supported its own two legal analyses with four independent peer review comments.

The Alliance twice requested to meet with the Corps to discuss this issue, as it is clear CWA has been in direct communication with the Corps to espouse its legal views. The Corps has refused to meet with us, necessitating this correspondence for the record.

This issue is of more than academic concern. Based upon the public meeting you conducted in October, 2003, it appears that the Corps is closely following the CWA prescription for EIS purpose and need and alternatives. The record reveals no independent analysis of this question by the Corps. CWA's vigorous attempts to defend its narrow view of the law confirm that this is an

396 Main Street, Hyannis, Massachusetts 02601 • 508-775-9767 • Fax 508-775-9725


issue of great importance to the legitimacy of the NEPA process. Indeed, Mr. Duffy's most recent letter on this point can best be described as "back-pedaling" on the underlying legal issue and an effort on CWA's part to justify the approach the Corps has adopted on other grounds. This marks a notable retreat from CWA's previous self-assured and adamant views on the question of the applicant's control over EIS purpose and need.

Mr. Duffy once again invokes the standard CWA response to any party critical of its proposal, i.e., that the purpose of the objections raised is only to seek delay. To the contrary, the Alliance's goals continue to be to ensure a valid EIS process and a full, comprehensive and programmatic review of alternative energy potential. Under a proper EIS purpose and need, a far broader range of alternatives would be considered. The Corps' alternatives analysis should include alternate technologies (including those discussed in the Commonwealth's MEPA certificate), phased projects, smaller-scale projects, distributed projects, and conservation. In addition, recent events make clear the need to consider alternatives outside of the New England Corps' jurisdiction, a view that we have consistently advocated. Offshore projects in other locations are under serious consideration, and they clearly should be reviewed as alternatives to Nantucket Sound. Indeed, the Cape Wind project and the nearby Long Island Power Authority project have been linked together for practical purposes on several occasions, and under NEPA they have to be considered together.

By defining the EIS scope and alternatives as it has, the Corps has failed to consider numerous alternatives that are not only legally required but also essential to a review of the potential for alternative energy development that serves the public interest. A proposed action such as the CWA project, involving a new technology on an unprecedented scale seeking to make use of public lands in the absence of express authorization, environmental standards, or a programmatic review under the responsibility of an agency that lacks the relevant expertise is precisely the kind of the situation where NEPA can be of its greatest value to inform agency decision-making and fulfill the public interest. Unfortunately, the approach currently defined for the DEIS guarantees that this function of NEPA will not be fulfilled. The public interests are being sacrificed to the narrow profit motive of this applicant, which refuses to consider any approach that is not to its liking. The Corps' duty is defined by the public interest, and the public interest is not the equivalent of Cape Wind Associates' private business objectives.

The Alliance remains prepared to meet with the Corps at any time to discuss this important issue. Unless the DEIS is redefined, it is clear that a supplemental EIS will be required. Contrary to Mr. Duffy's protestations, addressing this issue will not cause delay. Instead, it will result in a more expeditious and comprehensive review of all alternatives and in a context not dictated solely by this applicant's desire to maximize profits or assuage its corporate hubris. The approach the Alliance has advocated also will ensure that a decision can be made that avoids the many adverse impacts on Nantucket Sound by identifying other acceptable means to pursue alternative energy. The Alliance sincerely hopes that the Corps will accept an offer to meet with us and to reformat the approach to the draft EIS.

Very truly yours,



Sue Nickerson  
Executive Director

cc: Senator Edward Kennedy

Congressman William Delahunt  
Governor Mitt Romney  
Massachusetts Attorney General Thomas Reilly  
Earl Stockdale, U.S. Army Corps  
Lance Wood, U.S. Army Corps  
Karen Kirk Adams, U.S. Army Corps  
Lt. Gen. Carl Strock, U.S. Army Corps  
Christine Godfrey, U.S. Army Corps  
James Connaughton, Council Environmental Quality  
Dinah Bear, Council Environmental Quality  
Horst Greczmiel, Council Environmental Quality  
Betsy Higgins, U.S. Environmental Protection Agency  
Timothy Timmerman, U.S. Environmental Protection Agency  
Vernon Lang, U.S. Fish and Wildlife  
Edward LeBlanc, U.S. Coast Guard  
Barry Drucker, Mineral Management Service  
Truman Henson, Massachusetts Coastal Zone Management  
Jack Terrill, National Marine Fisheries Service  
Al Benson, U.S. Dept. of Energy  
Ellen Roy Herzfelder, Executive Office of Environmental Affairs  
Mary Griffin, Executive Office of Environmental Affairs  
Arthur Pugsley, Massachusetts Environmental Policy Act Office  
Phil Dascombe, Cape Cod Commission  
Beverly Wright, Wampanoag Tribe of Gay Head Indians  
John Pagini, Nantucket Planning and Economic Development Commission  
Dennis Duffy, Cape Wind Associates

# SAVE OUR SOUND

alliance to protect nantucket sound

October 29, 2004

Colonel Thomas Koning  
U.S. Army Corps of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01742

Dear Colonel Koning:

In our letter of October 24, the Alliance to Protect Nantucket Sound wrote to you regarding the issue of alternatives to the proposed Cape Wind project. In particular, we emphasized again the improper role the project applicant has been allowed to play in the NEPA process.

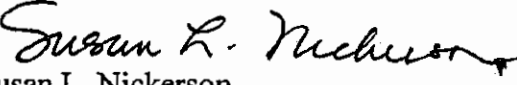
Since writing that letter, it has come to our attention that an important effort is now underway to refine promising deepwater wind turbine technology. The Alliance has previously pointed out that technology of this nature should be considered as an alternative to the applicant's environmentally and economically harmful Nantucket Sound proposal. Under Cape Wind's narrow and incorrect view of the law, a promising technology of this nature would never be considered. Cape Wind's erroneous legal interpretation is that the Corps is bound by the applicant's economic objectives, which, as presented in this situation, equate to a massive wind energy plant in Nantucket Sound and nothing else. As the Alliance has now demonstrated in detail, this is an incorrect legal position and contrary to the Corps' duty to define an EIS purpose and need and range of alternatives based upon the public interest.

The enclosed article quotes the Cape Wind project's principal investor, Mr. James Gordon, as suggesting that the Nantucket Sound location should still be developed, despite the promise of deepwater technology, because it would serve as a test project for offshore wind energy. Needless to say, it is hardly in the public interest to sacrifice Nantucket Sound as a stepping stone to other more promising and less harmful technologies that are now reasonably foreseeable. The discussion in the enclosed article again demonstrates why the Corps cannot be handcuffed by the applicant's own narrow objectives. The Alliance hereby requests that, prior to its

issuance for public comment, the draft EIS be revised to include alternatives using deepwater technology

Thank you for considering this request.

Very truly yours,

  
Susan L. Nickerson  
Executive Director

cc: Senator Edward Kennedy  
Congressman William Delahunt  
Governor Mitt Romney  
Massachusetts Attorney General Thomas Reilly  
Charles R. Smith, U.S. Army Corps  
Karen Kirk Adams, U.S. Army Corps  
Christine Godfrey, US Army Corps  
James Connaughton, Council Environmental Quality  
Dinah Bear, Council Environmental Quality  
Horst Greczmiel, Council Environmental Quality  
Elizabeth Higgins, U.S. Environmental Protection Agency  
Timothy Timmerman, U.S. Environmental Protection Agency  
Vernon Lang, U.S. Fish and Wildlife  
Edward LeBlanc, U.S. Coast Guard  
Barry Drucker, Mineral Management Service  
Susan Snow Cotter, Massachusetts Coastal Zone Management Office  
Jack Terrill, National Marine Fisheries Service  
Al Benson, U.S. Dept. of Energy  
Ellen Roy Herzfelder, Executive Office Environmental Affairs  
Phil Dascombe, Cape Cod Commission  
Truman Henson, Cape Cod Commission  
Dennis Duffy, Cape Wind Associates



To All: It is our sense that rather than wait for final agency comments on the Wind Farm EIS scoping notice, now is an opportune time to begin working on the basic project purpose and need portions of the EIS.

In accordance with our highway methodology, we intend to seek consensus and agreement on each of the aspects/issues to be addressed in the EIS process.

The proponent's application states that the project's purpose is "to generate up to 420 MW of clean, renewable wind - generated energy that will be transmitted and distributed to the New England regional power grid, including Cape Cod and the Islands..."

With regard to project need the applicant has made the following statements (from the project introduction in the application):

"The Project will provide numerous benefits to Cape Cod and the Islands through improved air quality conditions, significant reduction of greenhouse gases, the creation of year round jobs, the facilitation of technology transfer and reduction in electricity costs to ratepayers. Preliminary energy production estimates... suggest that production will coincide with the electricity demands of Cape Cod and the Islands. During the Summer months, production will be greatest during the late afternoon and early evening hours when consumption is at its peak. A similar pattern, although less pronounced, is expected for the other seasons. The presence of a large generating source close to the load demand centers on the Cape and Islands would also have the effect of reinforcing the reliability of this regional electric transmission and distribution system.

The Project will help Massachusetts reduce its dependency on foreign oil or other natural resources presently used to produce energy in the New England region. By using wind as a domestic, non-polluting and inexhaustible fuel source, the Project will displace approximately 170 MW of production that would otherwise be generated by the burning of fossil fuels. The New England Region currently relies heavily on the use of natural gas for its energy supply. Current forecasts for New England show severe capacity constraints for natural gas production at the end of the decade. The Project will help the Cape and Islands and rest of Massachusetts to become more energy self-sufficient by utilizing an untapped and abundant local resource.

Because there is no fuel cost component for the life of the Project, the cost of energy is fixed at financial close, thereby creating a natural hedge against oil and gas price spikes. The long term savings to New England ratepayers is estimated to be over \$800 million over the estimated 20 - year design life of the Project. The Project will also provide a unique opportunity for the Commonwealth of Massachusetts to lead the national energy initiative by hosting a large scale renewable energy project."

Please review this project purpose and need statement to ascertain if you feel it serves as an adequate basis for defining the range of alternatives to be analyzed in the EIS. We will be asking the applicant to provide the data that explains the conclusions they have provided.

In order to come to some agreement on the scope of alternatives we will first need to have a mutual understanding of the Purpose and Need. Please provide comments to me on this aspect by April 1, 2002.

Karen Adams

## **Purpose and Need**

The purpose of the proposed Cape Wind Project is to install and operate a commercial scale merchant electrical generating facility located in New England, utilizing renewable wind energy as its fuel source. Due to large infrastructure and capital costs, the variability of wind energy output, the relatively high cost of operating and maintaining a wind energy project, established constraints on transmission load flow / line capacities, and the economies of scale associated with such a project, the applicant has proposed a project capable of generating an average output of 170 MW, with a maximum installed capacity of 420 MW. The applicant states that this MW level and scale of project is necessary in order for the Project to be financially sustainable.

The applicant proposes to install and operate Wind Turbine Generators (WTGs) on Horseshoe Shoal in Nantucket Sound that will generate, on average, 170 MW of clean renewable energy using the natural wind resources off the coast of Massachusetts. This energy will be transmitted and distributed to the New England regional power grid, including Cape Cod and the Islands.

The Project need is based on the continued growth of electricity demand in the New England region, which is projected to increase up to 40% over the next twenty years. Presently the vast majority of electricity is produced by fossil fuel burning plants (coal, oil or natural gas) that are major contributing sources of air pollutants and green house gases. The applicant states that this Project is needed in order to meet a portion of the region's increasing demand for electricity with clean renewable energy that will:

- significantly improve regional air quality conditions;
- reduce greenhouse gas emissions by offsetting the use of fossil fuels;
- reduce the reliance on foreign fuel supplies;
- create a long term hedge against increasing fuel prices;
- reduce the overall cost to New England rate payers, and
- improve the reliability and diversity of the region's energy supply.

Preliminary energy production estimates suggest that production will coincide with the electricity demands of Cape Cod and the Islands. During the summer months, production will be greatest during the late afternoon and early evening hours when consumption is at its peak. A similar pattern, although less pronounced, is expected for the other seasons. A large generating source close to the load demand centers on the Cape and Islands will reinforce the reliability of this regional electric transmission and distribution system.

The applicant states that the Project will produce approximately the equivalent of Cape Cod's current energy requirements, and displace energy from fossil plants producing over 1,000,000 tons of carbon dioxide annually. Carbon dioxide is a major cause of greenhouse gases.

The applicant states that the Project will help Massachusetts reduce its dependency on foreign oil or other natural resources presently used to produce energy in the New England region. By using wind as a domestic, non-polluting and inexhaustible fuel source, the Project will displace

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approximately 170 MW of production that would otherwise be generated by the burning of fossil fuels. The New England Region currently relies heavily on the use of natural gas for its energy supply. Current forecasts for New England show severe capacity constraints for natural gas production at the end of the decade. The Project will help the Cape and Islands and the rest of Massachusetts to become more energy self-sufficient by utilizing an untapped and abundant local resource. The proposed Project will have the following annual fossil fuel offsets: oil – 113 million gallons/year, or coal – 570,000 tons/year, or natural gas – 10 billion cubic feet/year.

The applicant states that the proposed Project will have a long-term savings to New England ratepayers. This savings is estimated to be over \$800 million over the estimated 20-year design life of the Project. If the proposed Project is not built, New England ratepayers will continue to pay higher electricity costs. Consumers will continue to pay a variable rate for electricity without the proposed Project, whereas the proposed Project would not have a fuel cost component for the life of the Project. The cost of energy produced by the Cape Wind project is fixed at financial close, thereby creating a natural hedge against oil and gas price spikes. The Project will also provide a unique opportunity for the Commonwealth of Massachusetts to lead the national energy initiative by hosting a large-scale renewable energy project.

## **Adams, Karen K NAE**

---

**From:** Mead, Jane (ENV) [Jane.Mead@state.ma.us]  
**Sent:** Friday, May 24, 2002 4:15 PM  
**To:** Adams, Karen K  
**Cc:** Godfrey, Christine A; Valiton, Brian E; eric.hutchins@noaa.gov; vernon\_lang@fws.gov; Pugsley, Arthur (ENV); mfenn@capecodcommission.org; Timmermann, Timothy (E-mail); Skinner, Thomas (ENV); Truman Henson (E-mail); Babb-Brott, Deerin (ENV)  
**Subject:** RE: Comments on Draft Scope for Cape Wind EIS

CZM has the following comments on the draft Scope of Work for the Cape Wind Draft Environmental Impact Statement (DEIS). The draft Scope broadly outlines many of the major issues of concern. We believe, however, that some of the fundamental issues need further clarification:

**Purpose and Need:** the draft Scope does not include a statement of purpose and need. Without such a statement, it is very difficult to evaluate the Scope's effectiveness. Is, for example, the purpose of the project the generation of electricity or the generation of wind-powered electricity? Some of the later elements of the draft Scope seem to suggest that wind power is the focus of the DEIS (e.g. the Alternatives section is very specific about alternative locations, but not about technologies). While acknowledging that many technologies may be eliminated from consideration, CZM's recollection is that the alternatives were to be broader than a single technology.

**Screening Criteria:** we aren't sure if the draft language is suggesting that Cape Wind will determine the criteria for screening alternatives. We strongly believe that the Corps, in consultation with state and federal resource agencies, should determine the criteria to be used and that Cape Wind should perform analyses in compliance with those criteria. The method that the Corps will use to evaluate alternatives should be included in the DEIS.

**Massachusetts Renewable Energy Trust:** the Trust's current and future roles in this project should be included in the Scope to avoid any future misunderstanding or misinterpretation of its role.

**Project Description:** the requested construction and decommissioning descriptions apply to the "proposed structures" only. For purposes of impact comparison, construction methodologies for alternative types of sites, including terrestrial or other marine sites, should be included in the DEIS.

**Alternatives:** as mentioned above, this section seems to focus on alternative locations. The listed screening criteria also seem to presuppose wind as the power source. The statement of purpose and need should clarify whether the project is being considered as wind-generated electricity or as the broader generation of electricity and this section defined accordingly.

**Affected Environment:** reference is made to resource descriptions of the "final alternative sites". Will the "final" alternatives be determined within the DEIS? Is the proposed data collection for "final" alternatives for the purpose of making a final selection for further review or will these data support the preferred alternative only? How will public or agency comments, which will be made in response to the publication of the DEIS, affect the selection of "final" alternatives? It's unclear where these data fit into the final permitting decisions.

**Aviation:** the draft scope recommends conclusion of an FAA process that requires "precise coordinates of each tower" for inclusion in the DEIS. As our understanding of the DEIS is that its purpose is to support a

site selection decision-making process, we uncertain as to how the applicant can provide the information that the FAA requires within the proposed timeframe.

Navigation: the Scope should include an analysis of the type and frequency of commercial and recreational marine traffic, the impact of local weather (particularly fog and storms) on marine traffic, a discussion of the marine safety history of the area with an analysis of the impact of structures on safety, and a discussion of liability for collisions with structures in the water.

Cultural Resources: the Massachusetts Underwater Archeological Board has a marine archeological survey protocol, which CZM will require for its review.

Other issues and questions not addressed in the draft Scope include:

Public Trust: federal jurisdiction over non-extractive uses of the OCS is being developed in the same timeframe as the Cape Wind project review. CZM believes that the outcome of OCS resource allocation deliberations is a threshold issue for this proposed Cape Wind project. A major portion of the EIS should be devoted to an informative discussion of allocation of public resources, e.g. the water sheet, land under the ocean, habitat, and living resources.

Fiscal: project financing, liability coverage, and bonds for decommissioning and habitat restoration should be included in the DEIS. The applicant has already asked to be grandfathered from the proposed OCS/renewable energy legislation but if they aren't grandfathered, it will have significant impacts on the feasibility of the project. MMS has a good deal of experience with these issues and can be quite helpful.

Interconnect: the applicant should clearly demonstrate that the power generated would be accepted by NSTAR and the New England grid and that any associated closes are accounted for.

Pollutants: will fuels be stored on any of the structures associated with the project? If so, an MMS permit is required.

State Waters: the Massachusetts Energy Facilities Siting Board has pointed out that one of the three possible locations within Nantucket Sound is substantially within State waters.

Thanks for the opportunity to comment on this draft.



## **REVIEW OF OFFSHORE WIND FARM PROJECT FEATURES**

<b>Client</b>	<b>US Army Corps of Engineers</b>
<b>Contact</b>	<b>Karen K. Adams</b>
<b>Document No</b>	<b>3729/BR/01</b>
<b>Issue No</b>	<b>A</b>
<b>Status</b>	<b>FINAL</b>
<b>Classification</b>	<b>Client's Discretion</b>
<b>Date</b>	<b>23 July 2003</b>

**Author:**

---

**C A Morgan, P G  
Hodgetts, W W Schlez,  
C J A Versteegh**

**Checked by:**

---

**C A Morgan**

**Approved by:**

---

**A D Garrad**



## Revision History

Issue No:	Issue Date:	Summary
A	23 Jul 03	Original release

Circulation:	Copy No:
GH Bristol	1
GH Glasgow	2
Client	3

Copy No: \_\_\_\_\_

## **1 INTRODUCTION**

### **1.1 Background**

US Army Corps of Engineers (USACE) has contacted Garrad Hassan and Partners Limited (GH) to provide an overview of the state-of-the-art of the development of offshore wind farms, specifically in relation to the site environment.

This work has been undertaken to the specification of USACE who are undertaking an environmental impact assessment of the proposed CWA offshore wind farm development at Horseshoe Shoal, Nantucket Sound, USA.

### **1.2 Objectives**

USACE have defined the following objectives<sup>1</sup> :

- Provide a written analysis of the "state of the art" for offshore wind addressing whether and how the construction and operation is affected by water depth and wave conditions.
- Assess what advances are anticipated in this area in the next 2 to 3 years.

The above were to be achieved through a review of existing offshore wind farm projects and all projects anticipated to be constructed in the reasonably foreseeable future. The review was to gather key project and site parameters, primarily for comparison to those at the Horseshoe Shoal project, Nantucket, which is currently being assessed by USACE.

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<sup>1</sup> Email from Karen K Adams, USACE, to Colin Morgan, GH, 26 June 2003.

## Adams, Karen K NAE

---

**From:** Colin Morgan [morgan@garradhassan.com]  
**Sent:** Wednesday, July 23, 2003 11:44 AM  
**To:** Adams, Karen K  
**Cc:** Craig Olmsted  
**Subject:** Offshore wind farm sites review



3729br01a.pdf

Karen

Please find attached our report on the above. Please advise of any comments you may have and advise how many formal paper copies we should issue to (a) yourselves and/or (b) Cape Wind.

Colin Morgan

Direct dial: +44 (0) 117 972 9939  
Mobile: +44 (0)7980 578 212  
Tel: +44 (0) 117 972 9900  
Fax: +44 (0) 117 972 9901

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Silverthorne Lane  
Bristol BS2 0QD  
UK

[www.garradhassan.com](http://www.garradhassan.com)

**Adams, Karen K NAE**

---

**From:** Colin Morgan [morgan@garradhassan.com]  
**Sent:** Wednesday, July 30, 2003 5:34 AM  
**To:** Adams, Karen K  
**Cc:** Craig Olmsted  
**Subject:** RE: Offshore Wind Farm Review

Karen

Modified version attached as requested.

Colin

-----Original Message-----

**From:** Karen.K.Adams@nae02.usace.army.mil [mailto:Karen.K.Adams@nae02.usace.army.mil]  
**Sent:** 29 July 2003 16:16  
**To:** morgan@garradhassan.com  
**Subject:** RE: Offshore Wind Farm Review

We've discussed it here and it appears that the simple solution is to just delete that very last sentence in 5. *Conclusions.* The document is complete without it. Please finalize it and send one paper copy to me and at least one to Cape Wind. Thank you.

-----Original Message-----

**From:** Karen.K.Adams@nae02.usace.army.mil [mailto:Karen.K.Adams@nae02.usace.army.mil]  
**Sent:** 24 July 2003 19:46  
**To:** colin.morgan@garradhassan.co.uk  
**Subject:** Offshore Wind Farm Review

The first person that I had read the report misunderstood the very last sentence in the conclusion. If you have not yet mailed out the paper copy, please wait while I get some additional reactions. Thank you.

Karen K. Adams

Corps of Engineers, New England District

696 Virginia Road

Concord, MA 01742

978-318-8828, 1-800-363-4367 (from MA only) or 1-800 343-4789 ( other NE states)

Karen.k.adams@usace.army.mil

<<Adams, Karen K NAE.vcf>>

## 5 CONCLUSIONS

The work presented here has been undertaken for the US Army Corps of Engineers with the following findings:

1. A total of 23 wind farm projects have been identified, with total capacity over 2000 MW, which have been constructed recently or which GH consider certain or likely to come into commercial operation in the next 2 to 3 years.
2. For each of the offshore wind farm projects identified, the key project features and site characteristics have been identified, where available.
3. The survey has been aimed at providing a benchmark for the environmental assessment of the proposed Horseshoe Shoal site at Nantucket Sound. To that extent, it is evident that Horseshoe Shoal is, in most regards, at least as technically onerous as the majority of projects now being developed.

## **Alliance to Protect Nantucket Sound**

396 Main St., Suite 2 Hyannis, MA 02601 508-775-9767  
www.saveoursound.org

May 17, 2004

Colonel Brian A. Green  
U.S. Army Corp of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01742

### **Re: Improper Applicant Involvement in the Cape Wind Project EIS**

Dear Colonel Green:

The Alliance to Protect Nantucket Sound recently received several documents pursuant to its December 10, 2003 Freedom of Information Act (FOIA) request that are of great concern. These documents, which were omitted from the Corps' initial FOIA response, suggest that the U.S. Army Corps of Engineers has allowed Cape Wind Associates to assume an advisory role in the development of what is the Corps' environmental impact statement (EIS). The Alliance has repeatedly expressed its concerns regarding this potential problem. These recently released documents reinforce those concerns, and the Alliance would appreciate any light the Corps can shed on what appears to be a breach in the objectivity of the EIS.

Sometime in the spring of 2003, the Corps contacted Garrad Hassan and Partners Limited to prepare a report that would "provide an overview of the state-of-the-art of the development of offshore wind farms, specifically in relation to the site environment." Attachment 1. Per instructions of Ms. Karen Adams, Permit Manager for the Cape Wind project, the "review was to gather key project and site parameters, primarily for comparison to those at the Horseshoe Shoal project, Nantucket, which is currently being assessed by USACE." *Id.*

On July 23, 2003, Mr. Colin Morgan of Garrad Hassan emailed the requested report to Ms. Adams, asking for comments and an estimate of the number of copies the Corps and Cape Wind would require. Attachment 2. Mr. Morgan also carbon copied Craig Olmstead, Cape Wind's Vice President of Project Development, on that same email, but did not carbon copy the cooperating agencies.

Colonel Brian A. Green  
May 17, 2004  
Page 2

On July 24, Ms. Adams replied to Mr. Morgan's email stating, "The first person that I had read the report misunderstood the very last sentence in the conclusion. If you have not yet mailed out the paper copy, please wait while I get some additional reactions." Attachment 3. Ms. Adams followed up with Mr. Morgan on July 29, recommending that the final sentence of the conclusion be deleted and asking Mr. Morgan to send a paper copy to her and one to Cape Wind. *Id.* Mr. Morgan removed the apparently offending sentence and forwarded the modified version to Ms. Adams and Mr. Olmstead on July 30. *Id.*

The conclusion that apparently caused the misunderstanding – due to its last sentence – provided, "The survey has been aimed at providing a benchmark for the environmental assessment of the proposed Horseshoe Shoal site at Nantucket Sound. *To that extent, it is evident that Horseshoe Shoal is, in most regards, as least as technically onerous as the majority of projects now being developed.*" *Id.* (emphasis added to deleted sentence). Attachment 4A. Per Ms. Adams' instructions, that sentence was deleted.

In its final form, the Garrad Hassan report conveyed only three conclusions: 1) that a total of 23 wind farm projects are likely or certain to come into operation in the next 2 to 3 years; 2) for each offshore project, the key project features and site characteristics have been identified; and 3) the survey was aimed at providing a benchmark for the review of the Horseshoe Shoal site. Attachment 4B. The only sentence that provided any analysis of how Cape Wind's proposed site compared to other wind farms (presumably one of the purposes of the report) is the one that was deleted. That sentence concluded there were no technical advantages to Horseshoe Shoal over other sites. *Id.* This is, of course, one of the key issues in the EIS.

Mr. Olmstead of Cape Wind was the only person carbon copied on the initial email. Since it seems that the deleted sentence was far from confusing, but rather was merely a comparison of the technical feasibility of proposed project to that of other projects, the Alliance is concerned that the sentence may have been deleted simply because it was not to the liking of Cape Wind.

If that is not the case, the Corps should release any other documents regarding this issue. The Corps' own FOIA regulations require: "An internal communication concerning a decision that subsequently has been made a matter of public record must be made available to a requester when the rationale for the decision is expressly adopted or referenced in the record containing the decision." 32 C.F.R.



Colonel Brian A. Green

May 17, 2004

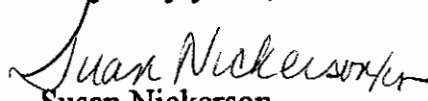
Page 3

§ 518.37(e)(5). Moreover, the review of this report and the removal of this sentence is a matter that apparently was the subject of communications with the applicant, and therefore is not within the scope of exemption (b)(5).

In addition to our concerns over the reasons why the Corps requested the deletion of this critically important sentence, the Alliance regards the circumstances surrounding this report as an example of how the EIS process has been compromised by the Corps' failure to follow standard procedures for selecting an EIS consultant and screening the applicant from critical policy and legal decisions. It is highly problematic that Cape Wind's Vice President of Project Development, Mr. Olmstead, appears to have been the only other party besides the Corps' permit manager who received a draft version of the report to review. This continuing involvement of the applicant in EIS policy and legal determinations undermines the public trust in the process and is creating serious legal deficiencies in the NEPA process.

For the record, Alliance restates its longstanding objection to the role the Cape Wind and its permit advocate consultant have been allowed to play in this EIS process. Thank you for considering the concerns raised in this letter.

Very truly yours,

  
Susan Nickerson  
Executive Director

Attachments

cc: See Attached List

Timmermann.Timothy@epam

ail.epa.gov

To: "Adams, Karen K NAE"

<Karen.K.Adams@nae02.usace.army.mil>,  
Vernon\_Lang@fws.gov

10/15/03 06:28 AM

cc: "Benson, Al, DOE" <al.benson@hq.doe.gov>,  
"angel.cases@faa.gov" <angel.cases@faa.gov>,  
"Pugsley, Arthur (ENV)"  
<Arthur.Pugsley@state.ma.us>,  
"barry.drucker@mms.gov" <barry.drucker@mms.gov>,  
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"Babb-Brott, Deerin (ENV)"  
<Deerin.Babb-Brott@state.ma.us>, "LeBlanc, Edward"  
<ELeBlanc@MSOProv.uscg.mil>, "Terrill, Jack, NMFS"  
<Jack.Terrill@noaa.gov>, 'Jane Mead'  
<Jane.Mead@state.ma.us>, "Julie.Crocker@NOAA.gov"  
<Julie.Crocker@NOAA.gov>, "Adams, Karen K NAE"  
<Karen.K.Adams@nae02.usace.army.mil>, "Laurie  
Perry,acting THPO" <laurie@wampanoagtribe.net>, "CC  
National Seashore,Maria Burks"  
<Maria\_Burks@NPS.gov>, "Dascombe, Phil, CCC"  
<pdascombe@capecodcommission.org>, "Holtham, Susan E  
NAE" <Susan.E.Holtham@nae02.usace.army.mil>  
Subject: RE: EIS public info meeting

Karen:

thanks for sending me the revised email message with all of the text.  
We have a couple of thoughts we would like for you to consider as you  
work to finalize your list of alternatives for presentation on October  
29.

South of Tuckernuck or South of Martha's Vineyard, Combinations of  
Tuckernuck (or Martha's Vineyard) or New Bedford and Nantucket Sound &

## the New Bedford Site

Since the meeting there appears to be a shift away from the area south of Martha's Vineyard to an area south of Tuckernuck. It is difficult to provide advice as to which of alternative you should pursue without additional information to understand the basis for such a decision. While we support the concept of the Corps exploring a site or sites in the general geographic area south of the islands, without more information we find it difficult to support one site over another as appropriately "representative." Similarly, we find it difficult to make a recommendation on combinations of alternatives or whether the New Bedford site should be advanced in the absence of more detailed information.

## Economics

Your message brings up the issue of economics and your goal to identify differences in constraints and cost factors associated with the sites to be studied for a project in the 200-1500MW size range. Last week at the Wind Power Tutorial we heard Dr. Manwell opine that under certain circumstances a 100MW offshore project could be commercially viable. While we understand that there are many factors that must be considered to determine the economics of a project in any location, we believe that it would be helpful for the Corps to illustrate the project size for an offshore wind project in the study area where project costs and projected revenues are roughly equal (the "break even" point). In this instance, if the break even point was illustrated for the applicant's preferred site in Nantucket Sound, it would provide a starting point for realistic discussions about project size and project impacts in the preferred and alternative sites and would benefit reviewers and the public, and allow for meaningful comparisons of relative impacts that would be based on projects that could realistically be developed.

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Office of Environmental Review

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Vernon Lang

To: "Adams, Karen K NAE"  
10/16/03 04:34 PM <Karen.K.Adams@nae02.usace.army.mil>  
cc: timmermann.timothy@epamail.epa.gov  
Subject: RE: EIS public info meeting(Document link:  
Vernon Lang)

Karen: I think Tim Timmermann raises some good points in his 10/15/03 email to you. I am beginning to get the sense that the only sites with a comparable level of information will be the applicants sites in Nantucket Sound. The others will likely have bits of information gathered for widely different purposes and with different survey techniques. Another point is that MMR, Tuckernut& New Bedford have not been proposed as wind farm sites by any developer and consequently, the question may be posed as to why they are representative sites.

Regarding my previous email, I once again read the Corps NEPA regs and see questions with your approach. How are you going to define the underlying purpose and need from the applicants perspective and the public's perspective. The example in the regs. Part 325, App. B.9.b. (4) seems to differ from the present approach.

In App. B. 9.b.(5a) it speaks to reasonable alternatives. Reasonable alternatives must be those that are feasible and such feasibility must focus on the accomplishment of the underlying purpose and need( of the applicant or public) that would be satisfied by the proposed Federal action. Since you do not have the underlying purpose and need defined yet, is it possible that the cart is in front of the horse?

9.b. (5c) talks about project substitutes and design modications under the rubric of functional alternatives. Don't we need to have the purpose and need clearly defined before functional and geographic alternatives can be dealt with?



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September 23, 2003

Ms. Karen Kirk Adams  
Chief, Permits and Enforcement Branch  
U.S. Army Corps of Engineers, Regulatory Division  
696 Virginia Road  
Concord, MA 01742

Re: Cape Wind Associates; The Nature and Extent of Alternatives Analysis Required under NEPA for the Permitting Review of Private Commercial Proposals; Corps File No. 199902477

Dear Ms. Adams:

I. Introduction

On behalf of Cape Wind Associates, LLC ("CWA"), this letter discusses the extent to which the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321, *et seq.*, requires the Army Corps of Engineers (the "Corps") to evaluate "alternatives" in the specific context of the permitting of a private proposal, such as that of CWA, to develop a commercial project at a particular site. As set forth below, the Federal courts have consistently held that the alternatives analysis required under NEPA for such private proposals is less extensive than for public proposals, and that the scope and depth of such analysis are properly limited by reference to the stated business objectives of the commercial applicant, including its objectives as to business strategy, commercial scale and economic viability. Thus, both the scope and depth of alternatives analysis in this instance should be determined with reference to CWA's stated purpose of undertaking a major renewable energy project with the indicated economics of scale and other practical attributes consistent with a viable commercial venture in the competitive energy markets.

II. Decisions of the Federal Courts Confirm the More Limited Scope and Extent of Alternatives Analysis Required for Private Permit Applications.

In the leading case in this Circuit, Roosevelt Campobello Int'l Park Comm'n v. E.P.A., et al., 684 F.2d 1041 (1st Cir. 1982) ("Roosevelt"), the Court upheld an environmental impact statement ("EIS") for a private proposal to develop a commercial oil refinery and associated deep-water terminal facilities. The appellant in that case argued that the EIS was flawed because the agency conducted "a less searching analysis of alternatives to this privately

sponsored project than it would have had the project been publicly funded." Id. at 1046. As an initial matter, the Court rejected such argument and confirmed that the scope and extent of alternatives analysis for a private project is more limited than the analysis applicable to a public project. The Court explained that the alternatives analysis of a private proposal has the more limited objective of exploring only those alternatives that are a "substantially preferable" or "obviously superior" means of meeting the applicant's purpose and thus need not, as in the case of public proposals, continue to study alternatives until "the optimum" site is determined:

EPA's evaluation of alternatives was explicitly based on the premise that its role in reviewing privately sponsored projects "is to determine whether the proposed site is environmentally acceptable", and not, as in the case of a publicly funded project, "to undertake to locate what EPA would consider to be the optimum site for a new facility." Therefore, EPA considered its purpose in this case to be to search for alternatives "that would be substantially preferable from an environmental standpoint." EPA concluded that "(t)his different purpose affects the extent of the information on alternatives necessary to make a decision." We are unable to fault EPA's reasoning. Petitioners concede that the substantive standard - "substantially preferable" - was correctly stated. Cf. New England Coalition on Nuclear Pollution v. NRC, 582 F.2d at 95-96 ("obvious superiority").

Id. at 1046-1047. (emphasis added.) In light of this limited objective of the alternatives analysis for private proposals, the Court went on to conclude that NEPA does not require that the environmental impacts at each alternative site be considered in the same level of detail as the proposed site. To the contrary, it held that NEPA requires that the alternative sites be studied only to the extent necessary to determine whether they would be "substantially preferable" or "obviously superior," such that, once an agency has sufficient information to determine that an alternative site is not "obviously superior," it need not conduct exhaustive further analysis of that site:

No purpose would be served by requiring EPA to study exhaustively all environmental impacts at each alternative site considered once it has reasonably concluded that none of the alternatives will be substantially preferable to the proposed site. Moreover, the guideline adopted by EPA to limit its study of alternatives appears, in this case, to be consistent with the "rule of reason" by which a court measures federal agency compliance with NEPA's procedural requirements.

Id. at 1047.

The Court then proceeded to discuss and uphold the agency's method of identifying and considering alternative sites largely by reference to the commercial applicant's intention to undertake a large-volume business venture that would allow the "economies of scale" that it deemed necessary to make the project "economically feasible":

EPA's choice of alternative sites was focused by the primary objectives of the permit applicant, the Pittston Co. Pittston stated that its basic consideration was to find a port with deep water near shore in order to accommodate [large-scale supertankers]. Only by using such supertankers could Pittston take advantage of economies of scale, thereby making the project economically feasible. Therefore, after Pittston had reviewed and rejected a number of sites lacking such deep water, EPA limited its consideration to the only [three other] ports providing deep water access.

*Id.* at 1047. These three alternative sites were then considered in greater detail, and each was found to be "not substantially preferable," largely because of attributes inconsistent with the business objectives of the applicant (including insufficient water depths to accommodate the intended scale of commercial vessels, unavailability of suitable land and exposure to more extreme marine conditions that would increase the hazard to commercial navigation.) *Id.* at 1048. Thus, the Court upheld the EIS alternatives analysis that was limited by the business objectives of the private applicant, and which conducted analysis of the "finalist" group of alternative sites sufficient for each to be found, "not obviously superior," with such finding based largely upon physical limitations inconsistent with the applicant's business objectives.<sup>1</sup>

Numerous other Federal court decisions have similarly recognized the more limited scope and substantive standard used to evaluate alternative sites in cases of private permit applications. In *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190 (D.C. Cir. 1991), *cert. denied*, 502 U.S. 994 (1992), the Court, in a decision written by Judge Clarence Thomas, upheld an EIS for a proposed commercial airport expansion. That EIS faced similar challenges to its alternatives analysis, which had "briefly described some alternatives," but, after screening those alternatives, "concluded that it had to consider in-depth the environmental impacts of only two alternatives," the proposed airport expansion and the no-action alternative. *Id.* at 193. The Court's opinion included the following statement of the agency's rationale for so limiting its alternative analysis according to the objectives of the private applicant:

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<sup>1</sup> Notably, the Council on Environmental Quality ("CEQ") in its "Guidance Regarding NEPA Regulations," 48 FR 34369 (1989), made favorable reference to the *Roosevelt* decision and clarified its earlier guidance, including its "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 FR 18026 (1981), which had previously indicated that "reasonable alternatives" include those that are "practical or feasible from the technical and economic standpoint in using common sense rather than simply *desirable* from a standpoint of the applicant." The CEQ's 1989 guidance noted that *Roosevelt* affirmed an alternatives analysis that "limited its consideration of sites to only those sites which were considered feasible, given the applicant's stated goals". The CEQ further concluded that this holding of *Roosevelt* "is in keeping with the concept that an agency's responsibilities to examine alternative sites has always been 'bounded by some notion of feasibility' to avoid NEPA from becoming 'an exercise in frivolous boilerplate' and that there is 'no need to disregard the applicant's purposes and needs in the common sense realities of a given situation in the development of all alternatives.'" Thus, provisions of prior CEQ guidance documents, including the "Forty Questions" of 1981, should be interpreted in light of the subsequent direction provided by *Roosevelt* and subsequent decisions of the Federal courts discussed herein.



The scope of alternatives considered by the sponsoring Federal agency, where the Federal government acts as a proprietor, is wide ranging and comprehensive. Where the Federal government acts, not as proprietor, but to approve and support a project being sponsored by a local government or private applicant, the Federal agency is necessarily more limited. In the latter instance, the Federal government's consideration of alternatives may accord substantial weight to the preferences of the applicant and/or sponsor in the siting and design of the project.

...

In the present system of federalism, the FAA does not determine whether to build and develop civilian airports, as an owner/operator. ... Airline managements are free to decide which cities to serve based on market forces.

Id. at 197. The FAA then proceeded to "briefly explain" that it eliminated the alternatives of different configurations at the proposed site and at other sites within the metropolitan area because they would be inconsistent with the proponent's stated commercial objectives.

The Court, citing to Roosevelt, further explained that "[w]hen an agency is asked to sanction a specific plan, see 40 C.F.R. § 1508.18(b)(4), the agency should take into account the needs and goals of the parties involved in the application," and that "Congress did not expect agencies to determine for the applicant what the goals of the applicant's proposal should be." Id. at 197, 199. The Court further noted the practical limitations upon the ability of Federal agencies to alter or second-guess the stated commercial objectives and analysis of private parties, with particular reference to entrepreneurial ventures in a formerly regulated industry:

[Plaintiffs'] view would require the FAA to canvas the business choices that [the commercial proponent] faced when it considered leaving Fort Wayne. But the agency has neither the expertise nor the proper incentive structure to do so (it has no shareholders who would suffer from mistaken judgments). And while Congress clearly wanted NEPA to extend federal agencies' range of vision to environmental concerns, it did not, so far as we can tell, aim at agencies' acquiring the skills of successful entrepreneurs. NEPA is supposed to make agencies more sensitive--but only, by definition, to matters environmental.

Id. at 197, n. 6. The Court then proceeded to uphold the elimination of alternatives, without further environmental review, once they were shown not to meet the applicant's business objective, citing in particular the "technological problems and extravagant costs" that would result from several alternative sites and alternative configurations that were eliminated from further study. Id. at 198.

In City of Grapevine, Texas v. Dept. of Transportation, 17 F.3d 1502 (D.C. Cir. 1994), cert. denied, 513 U.S. 1043 (1994), the Court, in an opinion written by Judge Ruth Bader Ginsburg, followed the opinion of Judge Thomas in Citizens Against Burlington and similarly upheld the EIS of a commercial airport expansion proposal, rejecting arguments that the FAA had improperly curtailed its consideration of alternatives to the stated economic purposes of the applicant. The draft EIS ("DEIS") in that case had originally considered only alternative configurations at the proposed site but, in response to comments on the DEIS, the final EIS also "briefly considered and rejected" several off-site alternatives, which were found to be either inconsistent with the stated purpose or dependent upon an "as yet an unproven concept" that would have been detrimental to the intended business development. Id. at 1506. Once again, the Court concluded that it was appropriate to frame the project's purpose and, hence, limit the alternatives analysis by reference to the "economic goals" of the petitioner:

[T]he petitioners (and some of the amici) argued that it was improper for the FAA, in defining the purpose of the project, to consider the economic goals of the project's sponsor, the DFW Airport Board. This argument is foreclosed, however, by our decision in Citizens Against Burlington: Per then Judge Thomas, where a federal agency is not the sponsor of a project, "the Federal Government's consideration of alternatives may accord substantial weight to the preferences of the applicant and/or sponsor in the siting and design of the project." 938 F.2d at 197-98. . . . Therefore, we conclude that the FAA's statement of purpose of the airport expansion project did not improperly constrain its consideration of alternatives in the FEIS.

Id. at 1506.

In another case citing to Roosevelt, Valley Citizens for a Safe Environment v. Aldrich, et al., 886 F.2d 458 (1st Cir. 1989), the Court, in an opinion of Judge Stephen Breyer, similarly upheld an EIS for the relocation of cargo airplanes from one airport base to another, rejecting arguments that the FAA had improperly curtailed further consideration of alternative sites once, for cost and other non-environmental reasons, such sites had been found to be "impractical" for the applicant's purpose. The Court confirmed that the appropriate objective of the alternatives analysis was to determine whether an alternative site might offer a "substantial measure of superiority" to the proposed site. Id. at 462. The Court then went on to hold that, once the agency had determined that an alternative site is "impractical" or not "substantially superior," it is not nonetheless required to continue on and subject that alternative to the full level of additional scrutiny applied to the proposed site, as follows:

The EIS makes clear that the Air Force will not send the C-5As to the other bases because of significant added construction costs or recruitment problems. It will not send them irrespective of environmental effects at those other bases; it will not send them even if there are no harmful environmental effects, even if no one in those areas thinks the planes are too noisy. What purpose, then, could a discussion of environmental effects at those other bases serve, at least as long as the Air Force makes clear it is prepared to evaluate those alternatives on the assumption that their "adverse environmental effects" are zero?

Id. at 462. The Court thus upheld as "perfectly reasonable" a two-page analysis demonstrating how each of the alternative sites was found to be "impractical" for the applicant's purposes due to "cost and other non-environmental objections," such that and the agency was not required to continue on with further consideration of environmental factors applicable to such alternatives sites.

III. More Recent Federal Decisions Continue to Apply the Rule of The Roosevelt Decision in Limiting the Scope and Extent of Alternatives Analysis for Private Permit Applications.

More recent federal decisions continue to apply the rule set forth in Roosevelt in limiting the scope and extent of alternatives analysis for private permit applications. In Rosebud Sioux Tribe v. Grover, 104 F. Supp. 2d 1194 (D.S.D. 2002), vacated on other grounds, 286 F.3d 1031, (8th Cir. 2002), cert. denied 154 L.Ed.2d 1020 (2003), the Court rejected the argument that an environmental assessment ("EA") for a commercial project on Indian land contained on alternatives analysis that was improperly limited to the commercial scale of project proposed by the applicant:

In the initial paragraph of this section, the EA clearly provides that the size of the project facility and the waste management systems would remain the same for each alternative considered. The size and capacity of the project were specified by [the commercial proponent] based on economic feasibility. This situation is of particular significance in the context of a private corporation. ... Unlike the far more common situation in which the federal agency itself is pursuing the activity, the only federal involvement is approval of the land lease. A private entity interested in bringing economic development opportunities to the reservations must primarily consider its own economic interest. Therefore, the alternatives evaluated in an EA are likely to be fewer in number and defined by economic feasibility factors.

Id. at 1209. The Court then went on to approve the deference afforded by the agency to the applicant with regard to its analysis of economic feasibility, a factor which limited the scope of the alternatives analysis:

The Court agrees with Plaintiffs that the range of alternatives explored in the EA satisfies NEPA's requirements. A private corporation, with an established reputation in [its] industry, knows which alternative is economically feasible – the preferred alternative. Given the significant need for economic development in the region, it would not be an effective or logical public policy to require private corporations to consider various alternatives which may not be in their economic self interest, simply for the sake of considering alternatives in the EA.

Id. at 1209.

In Hoosier Environmental Council, Inc. v. U.S. Army Corps of Engineers, et al., 105 F. Supp. 2d 953 (S.D. Ind. 2000), the Court similarly upheld the alternatives analysis of the EIS for a proposed riverboat casino project against claims that the alternatives were improperly limited in accordance with the commercial objectives of the proponent. In upholding the alternatives analysis, the Court in particular noted the substantial additional construction and rehabilitation costs that would be associated with alternative sites that were eliminated from further consideration, as well as the proponent's commercial objective of locating in close proximity to a major consumer market:

To be practicable, an alternative must be capable of being done, "taking into consideration cost, existing technology, and logistics in light of overall project purposes." 40 C.F.R. § 230.10(a)(2). It was not arbitrary, capricious, unlawful or an abuse of discretion for the COE to consider that added costs, extensive rehabilitation, possible contamination, and the logistics of travel to the [alternative] site, rendered that site not a practicable alternative. Nor was the assessment of any of the other alternative sites arbitrary or capricious.

Id. at 1002.

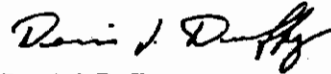
#### IV. Conclusion

As set forth above, both the scope and extent of alternatives analysis in this case should be determined by reference to the commercial objectives of CWA, as a private applicant for a commercial project. In particular, any alternative site that passes an initial screening process need only be studied to the extent necessary to determine whether it would be "obviously superior" to the proposed site. Thus, once the Corps has sufficient information to determine that an alternative site is not "obviously superior" for the applicant's purposes, that site need not be

Ms. Karen Adams  
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subjected to additional levels of analysis that may be applied to the proposed site. Finally, each phase of the alternatives analysis should be framed by reference to CWA's stated objective of undertaking a major renewable energy project with the indicated economies of scale and other practical attributes (including availability of proven commercial technologies acceptable to the financial community, construction, operation and maintenance costs, marine conditions, wind resources, transmission availability and proximity to a major customer load center) that would support a viable commercial venture in the competitive energy markets.

Sincerely,



Dennis J. Duffy  
Vice President

DJD/lrm  
Enclosures

Cape Wind  
Energy for Life.

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January 5, 2005

Ms. Karen Kirk-Adams  
Chief, Permits and Enforcement Branch  
United States Army Corp of Engineers  
696 Virginia Road  
Concord, MA 01742

Re: Cape Wind Associates; Regulatory Treatment of Incomplete or Unavailable Information under the National Environmental Policy Act ("NEPA"); ACOE File No. 199902477

Dear Ms. Adams:

I am writing to address the requirements under the NEPA and the regulations of the Council on Environmental Quality ("CEQ Regulations") in the event of incomplete or unavailable information. In particular, a concern has been raised over the perceived lack of sufficient information as to the possible presence of winter sea ducks within the rotor-swept airspace of the proposed project (i.e., the airspace from 75' to 417' above sea level at Horseshoe Shoal) at night during foul weather and storm events. It has been suggested that, in the absence of additional information, NEPA would require the ACOE to either reject the application or evaluate the proposed project under a "worst case" assumption as to the potential presence of, or impact upon, winter sea ducks under the stated conditions. Such conclusion, however, is contrary to the provisions of the CEQ Regulations, which were amended in 1986 to expressly rescind the former requirement that the permitting agency adopt "worst case" assumptions when information is deemed incomplete or unavailable. Importantly, the regulations also now limit the required analysis in such instances to those "reasonably foreseeable" concerns that are supported by credible scientific evidence, and not concerns based upon conjecture. As set forth below, we are confident that the ACOE has sufficient information to properly evaluate any such concerns in accordance with the relevant provisions of such regulations.

**I. The NEPA Regulations Have Expressly Rejected the "Worst Case" Approach in the Event of Incomplete or Unavailable Information.**

The CEQ Regulations contain express provisions (40 CFR § 1502.22, "Incomplete or unavailable information") defining the appropriate regulatory course in the event of incomplete or unavailable information. Such regulations anticipate that the EISs will proceed notwithstanding incomplete or unavailable information, and were amended in 1986 for the express purpose of eliminating the former requirement that the permitting agency proceed under a "worst case" assumption. Section 1502.22 now provides that "when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking," and proceed as follows:

If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the environmental impact statement: (1) a statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment; and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted by the scientific community. For the purposes of this section, "reasonably foreseeable" includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.

40 CFR § 1502.22(b).

In its initial notice of the proposed amendment ("Proposed Amendment to Worst Case Analysis Regulations"), the CEQ explained that "after an intensive review of the [former] regulation, the Council has concluded that the worst case analysis is an unsatisfactory approach to the analysis of the potential consequences in the fact of missing information." The CEQ therein further explained that there had been substantial concern under the former rule over "the limitless nature of inquiry established by this [worst case] requirement; that is, one can always conjure up a worst case by adding an additional variable to a hypothetical scenario." The CEQ went on to explain that, under the new rule, the range of study based upon the available information would thus be limited to those potential concerns that were based upon credible scientific analysis, and not those potential concerns based upon conjecture:

The Council believes that pure conjecture, that is, conjectural analysis, lacking a credible scientific basis is not useful to either decisionmaker or the public; rather, it could appear to be an indulgence in speculation for its own sake without a firm connection between credible science and hypothetical consequences of an agency's proposed action.

Id. In the CEQ Order releasing the final amended rule ("Final Amendment Revoking Worst Case Analysis Regulation"), the CEQ similarly explained that the required scope of study was limited "to reasonably foreseeable" impacts under the revised rule by adding the proviso "that the analysis of such impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason." Thus, the current CEQ Regulations plainly intend that EISs be completed in the event of incomplete or unavailable information, without resort to (i) a "worst case" assumption or (ii) the evaluation of potential effects that are not demonstrated to be "reasonably foreseeable" by credible scientific evidence.

## **II. The Federal Courts Have Confirmed the CEO's Rescission of "Worst Case" Regulation.**

The Federal Courts have confirmed the foregoing elimination by the CEQ of the former requirement of "worst case" regulation when an EIS process resulted in incomplete or unavailable information. In Robertson v. Methow Valley Citizens Council, et al., 490 U.S. 332 (1989), the United States Supreme Court upheld an EIS that was prepared in the face of unavailable information as to potential impacts upon a mule deer herd, and which did not include a "worst case" analysis. The Supreme Court based its decision largely upon the revised CEQ Regulations, which found to have showed a reasoned basis for revoking the "worst case" approach:

In 1986, however, CEQ replaced the "worst case" requirement with the requirement that federal agencies, in the face of unavailable information concerning a reasonably foreseeable significant environmental consequence, prepare "a summary of existing credible scientific evidence which is relevant to evaluating the ... adverse impacts" and prepare an "evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community." 40 CFR § 1502.22(b) (1987). The amended regulation thus "retains the duty to describe the consequences of a remote but potentially severe impact, but grounds the duty in evaluation of scientific opinion rather than in the framework of a conjectural "worst case analysis." 50 Fed. Reg. 32237 (1985).



Robertson, 490 U.S. at 373. Notably, the Supreme Court also referenced the CEQ's explanation that the revised regulation would provide a better implementation of NEPA by generating information on those consequences of greatest real concern and relevance, "rather than distorting the decision making process by overemphasizing highly speculative harms, 51 Fed. Reg. 15624-15625 (1986); 50 Fed. Reg. 32236 (1985)."<sup>1</sup> Robertson, 490 U.S. at 374. The Court concluded that, "in light of this well-considered basis for the change, the new regulation is entitled to substantial deference," and thus upheld the EIS which reflected the available scientific information without resort to worst case analysis. *Id.*

### **III. The Available Information is Sufficient to Satisfy the Requirements of the Revised NEPA Regulations.**

There should thus be no question that a "worst-case" assumption is not appropriate in this instance. There should also be no question that the information in question regarding the possible presence of winter sea ducks "cannot be obtained because the overall cost obtaining it exorbitant or the means to obtain it are not known." With respect to overall cost, the records shows plainly exorbitant costs, both as to the more than \$1 million financial cost, as well as the cost in the risk to human safety of marine operations in winter months, particularly during the indicated storm conditions. With respect to practicable ability to obtain such information, the record also shows that physical limitations of radar installation on a stationary barge platform, both as to vertical and horizontal radar, indicating that currently available measures will likely not yield significant additional information, and would be particularly ineffective during the indicated periods of winter storms and precipitation.

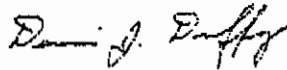
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<sup>1</sup> See, e.g., Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162 (10th Cir. 1999) (Upholding EIS where "the participants in the environmental review process were well aware of the relevance of lynx population data to consideration of the [project], the scarcity of such data, and the studies and reports of the Forest Service used to evaluate Lynx impacts based on available distribution, denning and foraging habitat information"); NRDC v. Evans, 254 F.Supp.2d 434, 443 (S.D.N.Y. 2003) (Upholding EIS where the lead agency "included in the Envtl. Imp. Stmt. a statement that there was incomplete information; they described the relevance of the information to reasonably foreseeable adverse impacts, and the existing scientific evidence relevant to such impacts, and they included an evaluation of such impacts") (citations omitted); Lee v. USAF, 354 F.3d 1229 (10th Cir. 2004) (Where information is unavailable, the four steps of § 1502.22 are "only required in regard to 'reasonably foreseeable significant adverse impacts,'" and were thus not required regarding speculation over the possible effects of increased air traffic upon property values.) Also see Sierra Club v. Sigler, 695 F.2d 957, 937 (5th Cir. 1983) ("Uncertainty as to environmental consequences need not bar action as long as the uncertainty is forthrightly considered in the decision making process and disclosed in the EIS.")

Karen Kirk Adams  
January 5, 2005  
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Neither we nor our ornithologists are aware of credible scientific information that would indicate that a significant presence of winter sea ducks within the rotor-swept area during the periods in question is a "reasonably foreseeable" result. Further, even if such a presence could be deemed "reasonably foreseeable," there is ample existing data that would, under "theoretical approaches or research methods generally accepted by the scientific community," allow the Corps to make a reasoned and favorable evaluation of any potential concern. Our ornithologists are prepared to discuss the large body of relevant information and literature and its appropriate application to this matter. To summarize, the site-specific studies in the Sound from 2002-2004 and other marine locations since the late 1990s indicate that the wintering sea ducks tend to fly at very low altitudes at (usually not more than 35 feet above the water) and the literature regarding observations at other wind turbine locations confirm no sea duck collisions at offshore wind farms and further indicates the ability of such ducks to avoid structures by altering their flight path under varying conditions. Under the provisions of Section 1502.22 of the revised CEQ Regulations, the existing information and literature are plainly sufficient for the reasoned and "hard look" required by the NEPA.

Very truly yours,



Dennis J. Duffy  
Vice President

## **I. Published in the Asbury Park Press 1/10/05**

By TODD B. BATES  
ENVIRONMENTAL WRITER

A new study on tapping wind power off the New Jersey coast shows that the state is on the right path by "pausing and taking a hard look at the appropriateness of industrial windmills in the ocean," according to a coastal environmental activist.

"It's a tremendously important and sensitive environment off of the Shore which ought to be dealt with with great care," Tim Dillingham, who heads the American Littoral Society, a Sandy Hook-based coastal conservation group, said Friday. He is also on a new blue-ribbon panel that will study the offshore windmill issue.

But Lester Starnes of Red Bank, a 55-year-old marine business owner in Atlantic Highlands, said he's been to Europe and Costa Rica and "they have windmills all over the place . . . and it doesn't affect the shoreline, and it's free energy."

Critics "have to have their head totally buried somewhere," Starnes said, adding that he can't comprehend all the "negative comment" about offshore windmills. "It's just the most viable thing that we need," he said.

Last week's unveiling of a state-funded study on the feasibility of putting wind turbines off New Jersey's coast drew an array of reactions from proponents and skeptics.

The \$300,000 report, "New Jersey Offshore Wind Energy: Feasibility Study," dated December 2004, was written by Atlantic Renewable Energy Corp. of Richmond, Va., with help from technical consultants, for the state Board of Public Utilities.

Atlantic Renewable Energy is an independent developer of wind projects on the East Coast, including six projects in New York, Pennsylvania and West Virginia, according to the study.

The 200-plus-page document appeared on the BPU's Web site as New Jersey begins a 15-month moratorium on offshore windmills imposed by acting Gov. Codey last month. Codey created the nine-member blue-ribbon panel to study the issue and make policy recommendations on the appropriateness of developing offshore wind turbine facilities, according to Codey's executive order on the issue, posted on a state Web site.

The new study says "the only viable opportunities for significant large-scale wind development in New Jersey are considered to be offshore where wind resources are much stronger and where certain land use conflicts can be avoided."

The "conditionally viable" area for a wind turbine project off the New Jersey coast is largely beyond the state's three-mile jurisdiction and covers roughly from the Seaside Heights-Seaside Park area south to Cape May, according to the study.

Such areas still have "important siting considerations that must be investigated in greater detail if specific projects are contemplated," the study says. "It is likely that more in-depth study of environmental constraints would exclude additional offshore areas from considerations for development."

The study area extends from Raritan Bay, along the oceanfront and into Delaware Bay, the study says.

It includes waters eight to 10 miles from the Jersey Shore and up to 100 feet deep, which is assumed to be the practical limit for wind turbine foundation designs within the next five years or so, the study says.

So far, all offshore wind projects have been installed in waters less than 65 feet deep, the study says. None has been built in the United States.

Winergy LLC of Shirley, N.Y., has proposed a wind farm with 98 electricity-generating turbines 3 1/2 miles off Monmouth County and 921 turbines at four locations off Cape May County, according to information from the company.

The turbines would be more than 400 feet high.

Winergy hopes to get approval for one of those sites, President Dennis Quaranta said recently.

Quaranta said last week he will read the study and "then I'll have lots of thoughts."

Atlantic Renewable Energy also has expressed interest in offshore wind farms.

Company project director Neil Habig said he couldn't comment on the study or on potential offshore projects.

James Lovgren, a commercial fisherman who lives in Brick and is a board member of the Garden State Seafood Association, said the commercial fishing industry is concerned about "having windmills basically on our fishing grounds, which would eliminate our fishing grounds."

"We can't just charge full speed ahead on this . . . without having some type of really good studies done," Lovgren said.

But Peter Murcko, a 61-year-old retiree who lives in Wall, said "we have to find alternative sources of power, and I think windmills off the coast of New Jersey is . . . the first step."

"We're wasting time on the moratorium," Murcko said. "We should try to get more studies completed . . . and then go from there. But my feeling is there's going to be a lot of opposition, and I don't feel it's going to be accomplished."

Asked if New Jersey would be able to block windmills in federal waters, which are beyond state waters, Codey has said it's an issue that may be taken to court.

Under the federal Coastal Zone Management Act, federal license or permit activities that affect any land or water use or natural resource in the coastal zone must be fully consistent with the "enforceable policies" of a state's coastal zone management plan, according to the National Oceanic and Atmospheric Administration Web site.

The federal commerce secretary can override a state's objection to federal permits and activities in some cases, the Web site says.

Sean Darcy, a spokesman for Codey, called the Atlantic Renewable Energy study "another valuable resource for Governor Codey's offshore windmill facilities panel to examine. It is important that all available data be weighed before the panel issues any findings."

Ted Korth, policy director of the New Jersey Audubon Society and a blue-ribbon panel member who opposed Codey's moratorium, said that based on generally a cursory review, the feasibility study "should be very useful to move forward the discussion on offshore wind."

The study clarifies a number of questions that "need to be answered and provides a great depth of background to help answer those questions," Korth said.

But Jennifer Samson, principal scientist for Clean Ocean Action, a Sandy Hook-based environmental coalition, said the study, "a literature review," is insufficient to determine the suitability of windmills in the ocean.

The American Littoral Society's Dillingham, who supported Codey's moratorium, said: "We're always skeptical about studies that are developed by folks that have a vested economic interest in the outcomes. I think that that shows up in the way that they present some of the findings.

"In its favor, the study acknowledges that it's not an environmental impact study and that there is information that remains to be developed as well as policy questions which remain to be answered," he said. "So this is not a definitive conclusion that windmills are appropriate off of the shore. It really is just an (inventory) of some certain existing information."

A statement from BPU President Jeanne M. Fox that was e-mailed to the Press said, "BPU has always pursued a balanced (approach) to securing New Jersey's energy future and will continue to do so.

"The study was not intended to substitute for an environmental review of any particular application or project," the statement said. "In particular, the study notes that there are still many considerations that must be investigated in greater detail. This study is just one of a number of resources available to Governor Codey's Blue Ribbon Panel."

Some activists and others say standards for regulating off-shore wind farms are inadequate or nonexistent, but industry officials say standards are adequate.

State standards for offshore windmills will be developed in a public process, and the Department of Environmental Protection hopes to have standards in place this year, DEP Commissioner Bradley M. Campbell has said.

DEP spokeswoman Elaine Makatura said Thursday that "we're not aware of any direction by the governor or the (blue-ribbon) panel to use this study to develop regulations . . . and we're not aware of any discussion of regulations" at this point. She added that it's too early in the process.

*Material from previous Press stories was included in this story.*

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**CONGRESSMAN FRANK PALLONE, JR.**  
*Sixth District of New Jersey*

FOR IMMEDIATE RELEASE:  
September 27, 2004

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**PALLONE DEMANDS FEDERAL ENVIRONMENTAL AND SOCIO-ECONOMIC ASSESSMENT OF WIND FARM PROPOSALS**

***Will Introduce Moratorium Legislation For Mid-Atlantic States***

Long Branch, NJ --- Concerned that the U.S. Army Corps of Engineers could allow the construction of a wind farm off the Monmouth County coast without any public input or an assessment of the environmental and economic impacts, U.S. Rep. Frank Pallone, Jr. (D-NJ) today requested the Army Corps not permit the construction of any offshore wind farm projects until the federal agency has completed a comprehensive assessment of all potential environmental and socio-economic impacts. The New Jersey congressman made the request in a letter to Lieutenant General Carl Strock, Commander of the U.S. Army Corps of Engineers.

The letter comes in response to a proposal by New York based Winergy, LLS calling for the construction of 1,019 wind turbines off the coast of New Jersey, encompassing 234 square miles of ocean space. One of the projects calls for the construction of 98 windmills 3.5 miles off the Monmouth County coast, reaching from Long Branch to Manasquan in Pallone's congressional district.

"New Jersey's shoreline is extremely valuable for a number of environmental and economic reasons," Pallone wrote in his letter to Lt. Gen. Strock. "Before you begin the process of determining whether and where to permit wind farms, government officials, area residents, and other stakeholder organizations must have a detailed conception of how these projects will impact shore tourism, the fishing industry, offshore recreation, local property values, water quality, and impacts to marine life and migratory bird populations."

Pallone called on the Army Corps to pay particular attention to the impacts that wind farms will have on the aesthetic quality of New Jersey's coastline. Pallone wrote that tourism is a vital part of New Jersey's economy, and voiced the concern of some area residents that wind farms could disrupt the view from the shore and negatively impact the number of tourists visiting New

Jersey's beaches.

Since proposals involving offshore wind farms are relatively new, Pallone also voiced concern that a structure is not currently in place outlining the requirements and procedures companies must meet in order to receive a permit to construct wind farms.

"I am also concerned that there does not seem to be a formalized process with strict guidelines to direct how you will issue permits for wind farms, assess these projects' impacts, and ensure public participation," Pallone continued in his letter. "I respectfully request that you develop such a process and inform me how you intend to do so."

The New Jersey congressman will also introduce legislation that would establish a moratorium on offshore wind farms in the Mid-Atlantic Region until a comprehensive assessment of all potential environmental and socio-economic impacts is completed, as well as public comments and forums.

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**Comments of the American Wind Energy Association  
to the  
*Draft Programmatic Environmental Impact Statement on  
Wind Energy Development on BLM-Administered Lands in the  
Western United States***

The American Wind Energy Association (AWEA) and its members greatly appreciate the efforts of the Bureau of Land Management (BLM) to develop the *Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States* (draft PEIS). BLM's desire to encourage renewable energy production, including wind energy, on federal lands is, as described in detail in the draft PEIS, beneficial for everyone involved in terms of economic benefits and clean electricity production.

The wind energy industry is pleased that the BLM developed the draft PEIS in order to bring standards and consistency to the BLM's consideration of environmental issues that are similar across all wind energy projects proposed on BLM-administered lands in the western U.S. As BLM officials such as Rebecca Watson, Assistant Secretary for Land and Minerals Management at the Department of the Interior, have indicated in the press, wind energy projects would continue to conform to site-specific analyses and public participation processes for individual projects. However, the ability to tier an Environmental Assessment (EA) off of the analyses in the PEIS and the decisions in the resultant Record of Decision (ROD) will allow all involved to focus on any site-specific issues and reduce the need for duplicative reviews for every wind energy project.

Below are selected statements and sections in the draft PEIS. In each case, AWEA's comments on the highlighted statement or section are provided and a recommendation is made. AWEA appreciates the opportunity to comment on the draft PEIS and looks forward to working with the BLM on the development of wind energy on public lands.

These comments reflect the views of the diverse membership of AWEA, including companies such as FPL Energy, Orion Energy, PPM Energy, SeaWest WindPower, Stoel Rives LLP, Tetra Tech, and Zilkha Renewable Energy.



## Application Process

**Statement:** "*Tiering off project-specific environmental analyses.* The BLM proposes that future, project-specific environmental analyses for wind energy development would tier off of the analyses conducted in this PEIS and the decisions in the resultant Record of Decision (ROD), and thereby allow the project-specific analyses to focus just on the critical, site-specific issues of concern." [2.2]

- **Comment:** Clarify this statement to indicate the preference for EA's rather than site-specific EIS's unless there is significant public concern or significant impacts. In the *Interim Wind Energy Development Policy* language was included to this effect.
- **Recommendation:** Add the following language from the Interim Policy: "A comprehensive Environmental Assessment (EA) will usually be required, however, an Environmental Impact Statement (EIS) may be required if significant public controversy or a determination of significant adverse impacts is made. It may also be possible to combine the required environmental review process for a wind energy development project with applicable State or local environmental procedures for energy facility siting. This would both streamline the process and be consistent with Departmental policy on intergovernmental cooperation."

## Wildlife

**Statement:** "Meteorological towers should not be located in or near sensitive habitats or in areas where ecological resources known to be sensitive to human activities are present." [2.2.3.2.1]

- **Comment:** We are aware of many cases of meteorological towers placed near sensitive areas where no adverse impacts were found.
- **Recommendation:** "Meteorological towers should not be located in or near locations known to support ESA-protected species which are expected to be adversely and significantly impacted by the installation of the meteorological tower."

**Statement:** "The monitoring program should incorporate adaptive management strategies to ensure that potential adverse impacts of wind energy development are mitigated to the fullest extent possible throughout the life of the project." [2.2.3.2.2]

- **Comment:** A continuous monitoring program appears to address all of the unknowns that could arise, creating significant uncertainty for the wind project owner.

- **Comment:** Right-of-way holders should not be required to mitigate impacts "to the fullest extent possible throughout the life of the project." Certain impacts, such as visual impacts, cannot be mitigated while others can be mitigated only at a cost that is disproportionate to the impact. This language should be amended to "mitigated to a level of insignificance, to the extent practicable."
- **Recommendation:** "If appropriate, the monitoring program should incorporate adaptive management strategies for a reasonable period of time to ensure that potential adverse impacts of wind energy development are mitigated to a level of insignificance, to the extent practicable."

**Statement:** " the location of turbines in areas with high bird usage, in known bird migration pathways, near wetlands and other bird-rich habitats, and in areas with a high incidence of fog and mist, should be avoided." [2.2.3.2.2]

- **Comment:** Scientifically-based avian studies and evaluation of proposed project sites can identify sites that pose a significant risk to avian species of concern. There are many existing wind projects that do not experience high rates of avian mortality but are near areas with high bird usage, in known bird migration pathways, near wetlands and other bird-rich habitats, and in areas with a high incidence of fog and mist.
- **Recommendation:** " the location of turbines in areas with high bird usage, in known bird migration pathways, near wetlands and other bird-rich habitats, and in areas with a high incidence of fog and mist, should be avoided *if site studies show the turbines would pose a significant risk to avian species of concern.*" [Emphasis indicates additional language proposed]

**Statement:** "turbines should be configured to avoid landscape features known to attract raptors" [2.2.3.2.2; 5.9.5.2.1]

- **Comment:** Scientifically-based avian studies and evaluation of proposed project sites can identify sites that pose a significant risk to raptor species of concern.
- **Recommendation:** "turbines should be configured to avoid landscape features known to attract raptors *only if a particular feature is heavily used by raptors and if site studies show placing turbines there would pose a significant risk to raptor species of concern.*" [Emphasis indicates additional language proposed]

**Statement:** "Procedures should be developed to mitigate potential impacts to special status species. Such [mitigation] measures could include avoidance, relocation of project facilities or lay-down areas, and/or relocation of biota." [2.2.3.2.2]

- **Comment:** Mitigation should be addressed to species of concern. "Species of concern" means species that might be in need of conservation action. (See <http://endangered.fws.gov/glossary.pdf>.) It includes species listed as threatened or endangered under the federal Endangered Species Act (ESA) and "candidate" species actively being considered for listing under the ESA.
- **Recommendation:** Replace "special status species" with "species of concern."

**Statement:** "New access roads and utility corridors should be configured to avoid high quality habitats and minimize habitat fragmentation." [5.9.5.2.1]

- **Comment:** Any required measures to protect habitats should be addressed to "species of concern" and must be practicable.
- **Recommendation:** "New access roads and utility corridors should be configured to avoid high quality habitats *of species of concern* and minimize fragmentation *of habitats of species of concern, to the extent practicable.*" [Emphasis indicates additional language proposed]

**Statement:** "Permanent meteorological towers, transmission towers, and other facility structures should be designed so that they cannot be used for perching or nesting by birds." [5.9.5.2.1]

- **Comment:** Developers cannot guarantee that no perching or nesting will occur on any structures in a project. For example, developers cannot prevent perching or nesting on an O&M building.
- **Recommendation:** "Permanent meteorological towers *and wind turbines* should be designed to *minimize the potential for perching and nesting by raptors, to the extent practicable. Overhead distribution lines should conform to the recommendations of the Avian Power Line Interaction Committee (APLIC) in its Suggested Practices for Raptor Protection on Power Lines (1996).*" [Emphasis indicates additional language proposed]

**Statement:** "Turbines and other project facilities should not be located in areas with known high bird usage; in known bird and/or bat migration corridors or known flight paths; near raptor nest sites; and in areas used by bats as colonial hibernation, breeding, and maternity/nursery colonies." [5.9.5.2.1]

- **Comment:** Scientifically-based avian and bat studies and evaluation of proposed project sites can identify sites that pose a significant risk to avian and bat species of concern. There are many existing wind projects that do not experience high rates of avian or bat mortality but are near areas with known high bird usage; in known bird and/or bat migration corridors or known flight paths; near raptor nest

sites; and in areas used by bats as colonial hibernation, breeding, and maternity/nursery colonies.

- **Recommendation:** "Turbines and other project facilities should not be located in areas with known high bird usage; in known bird and/or bat migration corridors or known flight paths; near raptor nest sites; and in areas used by bats as colonial hibernation, breeding, and maternity/nursery colonies, *if site studies indicate that they would pose a high risk to species of concern.*" [Emphasis indicates additional language proposed]

**Statement:** "Buffer zones should be established around raptor nests, bat roosts, and biota and habitats of concern." [5.9.5.3.2]

- **Comment:** Scientifically-based avian and bat studies and evaluation of proposed project sites can identify sites that pose a significant risk to avian and bat species of concern. There are many existing wind projects that do not experience high rates of avian or bat mortality but are near raptor nests, bat roosts, or biota or habitats of concern.
- **Recommendation:** "Buffer zones should be established around raptor nests, bat roosts, and biota and habitats of concern *if the proposed turbines and other project facilities are shown to pose a significant risk to avian or bat species of concern.*" [Emphasis indicates additional language proposed]

**Statement:** "Higher-height vegetation should be encouraged along transmission corridors to minimize foraging in those areas by raptors." [5.9.5.4.3]

- **Comment:** This language appears to be specific only to the Altamont Pass Wind Resource Area and not applicable to wind projects in other locations. Additionally, there are other concerns, such as public safety (e.g. fire hazard) and maintenance issues that conflict with this recommendation.
- **Recommendation:** Delete this statement.

**Statement:** "Biota protected by state statutes should be relocated." [5.9.5.6]

- **Comment:** This statement is too broad. Biota means all the plant and animal life of a particular region. If plants protected by state statutes will be unavoidably impacted by the proposed turbines or other project facilities, one possible means of mitigating the impact is to relocate the impacted plants to another location, but relocation may not always be the best or most practical choice for mitigation. State law will dictate the preferred means of protecting biota protected under state statutes.

- **Recommendation:** Delete this statement.

## Sound

**Statement:** "Proponents of a wind energy development project should take measurements to assess the existing background noise levels at a given site and compare them with the anticipated noise levels associated with the proposed project."  
[2.2.3.2.2; 5.5.5]

- **Comment:** Project proponents should be required to comply with applicable state and local noise regulations. Most noise regulations do not require measurements of background noise levels prior to installation of the project. In many cases, there will not be any sensitive receptors close enough to the proposed turbines to hear the wind turbine noise, so these measurements will serve no useful purpose.
- **Recommendation:** Replace this statement with the following: "If there are residences, hospitals, retirement facilities, churches or other sensitive noise receptors within 1 mile of the proposed wind turbines, then project proponents should model the expected noise levels at the nearest receptor to ensure compliance with state and local noise standards applicable to the project."

## **Section:** Low-Frequency Sound [3.3.5]

- **Comment:** A critical survey of published measurement results of infrasound from wind turbines concludes that wind turbines with the rotor located upwind of the tower produce only very low levels of infrasound [See reference below]. Even measured quite close to these turbines the infrasound level was found to be far below relevant assessment criteria, including the limit of human perception. In the evaluation of the environmental impact of wind turbines, such low infrasound levels are not significant.

### Reference:

- Jørgen Jakobsen, Danish Environmental Protection Agency, **Infrasound Emission from Wind Turbines**, 11th International Meeting On Low Frequency Noise and Vibration and its Control, Maastricht, The Netherlands, 30 August to 1 September 2004.
- **Comment:** Wind turbines with a downwind rotor generate considerably higher infrasound levels, which may violate relevant assessment criteria in distances up to several hundred meters. At greater distances the infrasound level drops below these criteria, and experts have questioned whether the infrasound can be the cause of reported negative public reactions to large downwind turbines.

### Reference:

- Jørgen Jakobsen, Danish Environmental Protection Agency, **Infrasound Emission from Wind Turbines**, 11th International Meeting On Low Frequency Noise and Vibration and its Control, Maastricht, The Netherlands, 30 August to 1 September 2004.
- **Comment:** Dr. Geoff Leventhall, noted acoustical expert and author of "A Review of Published Research on Low Frequency Noise and its Effects," has commented on the effects of low-frequency noise from wind turbines, as follows: "There is only a relatively small amount of low-frequency noise from wind farms, where low-frequency noise is taken to mean 10 Hz to about 200 Hz. The noise is mainly mechanical, and gear related. Considering infrasound as below 20 Hz, there is very little from wind turbines. You have to distinguish between what is technically interesting and what is relevant to subjective effects. Available information shows that infrasound levels at approximately 100 meters from a turbine rise to 60 to 70 dB at 10Hz, where the average hearing threshold is nearly 100 dB. I really do not expect infrasound from modern wind turbines to be an issue, but because of the publicity which has been given to low frequency noise, we have to take this on board in order to find out the true facts".  
References:
  - Bastasch, Mark. **Revising Oregon's Noise Regulations for Wind Turbines**. NOISE-CON 2004. Baltimore, Maryland. July 12-14, 2004.
- **Comment:** This section appears to be based on an older installations of downwind machines. It references subjective criteria and 'complaints'. This section is alarming and unnecessary given that *all modern turbines are upwind*.
- **Recommendation:** Modify this section to reflect the comments above.

**Statement:** "The human response to changes in decibel levels has the following characteristics (NWCC 1998): A 3-dB change in sound level is considered a barely noticeable difference; A 5-dB change in sound level will typically result in a noticeable community response; and, A 10-dB change, which is generally considered to be a doubling of the sound level, almost certainly causes an adverse community response." [4.5.1]

- **Comment:** This statement is overbroad and lacks context when applied to a wind project. At many project sites on BLM-administered lands, large fluctuations in broadband wind noise will be common, and an increase from 20 to 30 dB or even 30 to 40 dB would not likely be objectionable to the community.
- **Recommendation:** Delete this statement.

**Statement:** "Proponents of a wind energy development project should take measurements to assess the existing background noise levels at a given site and

compare them with the anticipated noise levels associated with the proposed project (Section 4.5.2)." [5.5.5]

- **Comment:** Project proponents should be required to comply with applicable state and local noise regulations. Most noise regulations do not require measurements of background noise levels prior to installation of the project. In many cases, there will not be any sensitive receptors close enough to the proposed turbines to hear the wind turbine noise, so these measurements will serve no useful purpose.
- **Recommendation:** Replace this statement with the following: "If there are residences, hospitals, retirement facilities, churches or other sensitive noise receptors within 1 mile of the proposed wind turbines, then project proponents should model the expected noise levels at the nearest receptor to ensure compliance with state and local noise standards applicable to the project."

**Statement:** "Noisy activities should be scheduled to occur at the same time since additional sources of noise generally do not add a significant amount of noise." [5.5.5]

- **Comment:** It may be appropriate to include the time-of-day restrictions on noisy activities, but this statement implies that all blasting must be done at the same time, which is impractical and would significantly increase the amount of noise.
- **Recommendation:** Delete this statement.

## Visual

**Statement:** "Turbine arrays and the turbine design should be integrated into the surrounding landscape. To accomplish this integration, several elements of design need to be incorporated." [5.11.6]

- **Comment:** This statement would be difficult or impossible to comply with in many cases. Turbine placement is usually not flexible, as the turbines must be located where they will operate most effectively, and changes in placement often substantially impact performance. Further, turbine placement, design and integration should not be implemented to the detriment of other environmental considerations and may not be economically viable.
- **Recommendation:** This statement should be deleted.

**Statement:** "The operator should avoid placement of ancillary structures on high land features and along "skylines". [5.11.6]

- **Comment:** This statement is too broad. There is often no practical alternative to placing ancillary structures on high land features and along "skylines".
- **Recommendation:** *"To the extent practicable, the operator should avoid placement of substations or large operations buildings on high land features and along 'skylines' that are visible from nearby sensitive view points."* [Emphasis indicates additional language proposed]

**Statement:** "The operator should bury power collection cables or lines on site." [5.11.6]

- **Comment:** It may be impracticable to bury power collection cables or lines where blasting is the only commercially reasonable method of burying the power line, or where the power line crosses a road, railroad, pipeline, power line, ravine, flowing water, wetland, or location that has plant species of concern.
- **Recommendation:** *"If practicable, the project proponent should bury power collection cables or lines on site unless burial would result in increased impacts or would violate applicable law."* [Emphasis indicates additional language proposed]

### **Noxious Weeds**

**Statement:** "...the cleaning of vehicles prior to arrival at a location to avoid the introduction of invasive weeds should be required." [2.2.3.2.2]

- **Comment:** It is impracticable and unnecessary to clean every vehicle prior to its arrival at the project location.
- **Recommendation:** Replace this statement with the following: "Comply with federal, state, and local noxious weed control regulations. Provide a 'clean vehicle policy' while entering and leaving construction areas to prevent transport of noxious weed plants and/or seed."

### **Hazardous Materials and Waste Management [Section 2.2.3.2.2]**

- **Comment:** It should be sufficient for the BLM to require that an operator comply with all applicable state and federal hazardous materials and waste management laws.



- **Recommendation:** Replace this section with the following: "A wind project operator must develop a spill prevention and response plan and a stormwater pollution plan, if applicable, in compliance with federal and state law."

## **Safety**

**Statement:** " the health and safety program should establish a safety zone or setback from residences, roads, and other public access areas that is sufficient to prevent accidents resulting from various hazards." [2.2.3.2.2]

- **Comment:** The public has access to much of the land managed by the BLM. The inclusion of "other public access areas" is a vague term that could be interpreted to cover vast areas not appropriate to protect public safety.
- **Recommendation:** " the health and safety program should establish a safety zone or setback *for wind turbine generators* from residences *and occupied buildings*, roads, *railroad rights-of-way*, *transmission corridors* and *above-ground pipelines* that is sufficient to prevent accidents resulting from *the operation of wind turbine generators*." [Emphasis indicates additional language proposed]

**Statement:** "The project should be designed to establish a sufficient setback from turbines to the nearest residence to reduce EMF, shadow flicker, and exposure to low-frequency sound emissions. A minimum setback distance of 10 rotor diameters is recommended to reduce shadow flicker (Burton et al. 2001) and may be sufficient for EMF and low frequency sound." [5.8.2 Public Safety, (pg 5-34)]

- **Comment:** A 10 rotor diameter setback is excessive and unnecessary to address the issues of EMF, shadow flicker and low frequency sound, as discussed elsewhere in these comments.
- **Recommendation:** Delete the 10 rotor diameter setback recommendation and replace these statements with the following: "If operation of the wind turbines is expected to cause significant adverse impacts to nearby residences and occupied buildings from shadow flicker or low frequency sound, site specific recommendations for addressing these concerns should be incorporated into the project design."

## **Shadow Flicker**

**Statement:** "A minimum distance of 10 rotor diameters is recommended to reduce shadow flicker " [2.2.3.2.2]

- **Comment:** A 10 rotor diameter setback to reduce shadow flicker is not based on any objective criteria. Shadow flicker at potential receptors depends on a number of different criteria including sun-angle, vegetative cover (or other landscape features), and topography. At distances of greater than 1000 feet between wind turbines and potential receptors, shadow flicker only occurs at sunrise or sunset when the shadows from moving turbine blades are sufficiently long, and generally for only a small number of hours per year. Shadow flicker can be prevented by switching on lights in an affected room, by covering a window with curtains, blinds or shutters, or by screening windows and/or receptors with trees, shrubs, fences or similar objects.
- **Comment:** There are no documented human or animal health impacts associated with shadow flicker. The shadow flicker frequency from modern wind turbines varies, but is generally between 0.6 to 1.0 Hz (less than 1 alternation per second), whereas the Epilepsy Foundation states that frequencies below 10 Hz are not likely to trigger photosensitive epilepsy seizures.
- **Recommendation:** Delete the 10 rotor diameter setback for shadow flicker or modify it to reflect the comments above.

## Lighting

**Statement:** "Additional warning information may also need to be conveyed to aircraft with onboard radar systems so that echoes from wind turbines can be quickly recognized." [2.2.3.2.4; 5.8.2] " the FAA should be consulted so that only white strobe lights with a minimum number of flashes per minute are used." [pg 5-65]

- **Comment:** The Federal Aviation Administration (FAA) is responsible for determining hazards to aircraft and air traffic, and for making lighting determinations. Recommendations such as this should be left to the appropriate agency, the FAA. The FAA is currently considering revisions to its wind power project lighting guidelines, and wind project developers should comply with the FAA's guidelines.
- **Recommendation:** Replace these statements with the following: "Projects must comply with applicable requirements of the FAA."

## Site Construction Activities

**Statement:** "All electrical collector lines should be buried adjacent to roads, unless it is necessary to install surface lines to avoid further habitat disturbance." [2.2.3.2.3]

- Comment: If the environmental impacts associated with an above-ground electrical collector line (including avian impacts) are not expected to be significant, then above-ground lines should be a viable option. Additionally, it is sometimes not practical to bury the lines adjacent to roads. For example, if the road is on one side of a string of turbines and the transformers are located on the other side (to minimize the risk of a vehicle hitting a transformer, which itself could have adverse environmental impacts), then it may be more practical to bury the electrical collector line on the transformer side of the turbine string instead of next to the road.
- Recommendation: This comment should be deleted or modified to reflect the comment above.

Statement: "The footprints of substations are expected to be 1 acre (0.4 ha) or less in size " [3.1.2.4]

- Comment: Expected substation size may be more than 2 acres.
- Recommendation: Change this phrase to read "to be 5 acres or less in size."

Statement: "Because most towers are equipped with lifting devices of sufficient capacity to lower or raise individual drivetrain components, a crane should not be needed for such component replacements." [3.1.3]

- Comment: Many drivetrain components will require a separate crane.
- Recommendation: Delete this sentence.

## **Regulatory Requirements**

Statement: "This section identifies the major laws, regulations, executive orders (E.O.s), compliance instruments, and policies that may impose environmental protection and compliance requirements on site monitoring and testing, construction, operation, and decommissioning phases of a wind energy project on BLM-administered land." [3.2]

- Comment: It would be beneficial to affirm that not all of the regulations listed apply to all wind projects.
- Recommendation: Add the following sentence after this statement: "This list of laws and regulations may not apply to every wind project."

**Statement:** "Appendix E lists the relevant federal and state statutory authorities that establish permits, approvals, or consultations with which a wind energy project must comply." [3.2]

- **Comment:** See previous comment.
- **Recommendation:** "Appendix E lists the relevant federal and state statutory authorities that establish permits, approvals, or consultations with which a wind energy project must comply, *where applicable*." [Emphasis indicates additional language proposed]

**Statement:** "Also, the construction of a wind energy project may be required to consider impacts on local populations, including E.O. 12898, 'Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations' (U.S. President 1994), and E.O. 13045, 'Protection of Children from Environmental Health Risks and Safety Risks' (U.S. President 1997). Certain states may have specific requirements with regard to nuisances, including Arizona (Environmental Nuisances [Arizona Revised Statutes (ARS) 49-141 et seq.] and Light Pollution [ARS 49-1101 et seq.]) and New Mexico (Night Sky Protection Act [74-12-1 New Mexico Statutes Annotated (NMSA) 1978 et seq.])." [3.2]

- **Comment:** These E.O.s and statutes may not apply to wind projects. In any event, it ought to be recognized that (1) wind projects must be sited where there is an adequate wind resource and transmission access, which is often in rural areas that may have a significant minority population and low-income population, (2) wind projects pose few if any environmental health risks or safety risks to the local community, and (3) wind projects provide significant economic benefits to the community in the form of jobs, tax revenues for public schools and hospitals, and additional income for landowners which often include small farmers and ranchers.
- **Recommendation:** Modify this statement to reflect the comment above.

**Statement:** "*Land use.* Depending on the location of a proposed wind energy project, special land use determinations may need to be made, particularly if the project is to be sited in or would impact special or protected areas." [3.2]

- **Comment:** The term "special" used in this section is unclear.
- **Recommendation:** Add a definition of "special" as used in this context, require the BLM Field Office to identify "special" areas in local land use plans, or delete this statement.

**Statement:** "*Floodplains and wetlands*. While turbines would not be located in wetland areas or adjacent to other water bodies " [3.2]

- **Comment:** Turbines located in wetland areas or adjacent to other water bodies may be subject to separate legal requirements.
- **Recommendation:** Replace this statement with the following: "Project facilities may sometimes be located in wetland areas or adjacent to other water bodies, and these facilities should comply with statutory requirements and associated regulations established by the Army Corps of Engineers if applicable."

#### **Voltage Flicker [3.3.7]**

- **Comment:** Voltage flicker or stability is not an environmental issue.
- **Recommendation:** This section should be deleted.

#### **Water**

**Statement:** "Culverts of adequate size to accommodate the runoff of a 25- and 100- year storm for temporary and permanent roads, respectively, should be used when constructing stream or wash crossings." [5.3.5]

- **Comment:** The requirement to design stream and wash crossings for 25- and 100-year storms is appropriate for urban areas, not the rural settings where wind projects are generally located.
- **Recommendation:** Replace this statement with the following: "When constructing stream or wash crossings, culverts or water conveyances for temporary and permanent roads should be designed to comply with county standards, or, if there are no county standards, to accommodate the runoff of a 10-year storm."

#### **Electromagnetic Fields (EMF)**

**Statement:** "A health and safety program should be developed to protect workers during construction, operation, and decommissioning of a wind energy project. The program should identify all applicable federal and state occupational safety standards, establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; OSHA standard practices for safe use of explosives and blasting agents; measures for reducing occupational EMF exposures), " [5.8.1]

**Statement:** "Measures should be considered to reduce occupational EMF exposures, such as backing the generator with iron to block EMF, shutting down the generator when working in the vicinity, and/or limiting exposure time while the generator is running (Robichaud 2004)." [5.8.1]

**Statement:** "These hazards include risks associated with major construction sites, rare tower failures, human-caused fire, EMF exposure, aviation safety interference, EMI, low-frequency sound, and shadow flicker." [5.8.2]

- **Comment:** Numerous studies have shown that EMF does not present a significant public health risk, even to workers who experience relatively high exposure levels. Further, most government agencies that have studied this issue have not proposed safety standards for cancer, leukemia or similar health risks allegedly attributable to worker exposure to EMF. For example, the National Institute for Occupational Safety and Health (NIOSH) and other government agencies do not consider EMF a proven health hazard (see <http://www.cdc.gov/niosh/emf2.html>). Examples of the research results are available at <http://www.powerlinefacts.com/Steering%20Committee%20Information%20Hearing/Expert%20Testimony/Valberg%20testimony.htm>
- **Recommendation:** Modify these sections to reflect the comment above.

### **Electromagnetic Interference (EMI)**

**Statement:** "These hazards include risks associated with major construction sites, rare tower failures, human-caused fire, EMF exposure, aviation safety interference, EMI, low-frequency sound, and shadow flicker." [5.8.2]

- **Comment:** No specific standards exist for wind turbine generators with regard to EMI, though the standards contained in FCC Rules, Title 47, Chapter 1, Part 15 establish criteria for emissions from many electronic devices. These rules establish that devices may not produce "Harmful Interference", defined as "Any emission, radiation or induction that endangers the functioning of a radio navigation service or other safety services or seriously degrades, obstructs or repeatedly interrupts a radio communications service operating in accordance with this chapter". This language should state that EMI levels from wind projects should conform to the federal standards contained in FCC Rules, Title 47, Chapter 1, Part 15.
- **Recommendation:** Require that wind projects comply with FCC rules (defined above), if applicable.

**Agency Consultation and Coordination (Section 7.4)**

- **Comment:** This section of the PEIS indicates that BLM will be consulting with the U.S. Fish & Wildlife Service (USFWS) in accordance with the requirements of Section 7 of the ESA.
- **Recommendation:** Assuming that the BLM receives a programmatic Biological Opinion (BO), the BO should contain language allowing site-specific BOs to tier off of the programmatic BO and allow for an expedited consultation schedule with flexibility in the amount of data needed. The BLM has requested the option for such expedited Section 7 consultation in other programmatic consultations with the USFWS.

April 22, 2002

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS  
ON THE  
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Cape Wind Project  
PROJECT MUNICIPALITY : Barnstable, Yarmouth, and Federal  
Waters of Nantucket Sound  
PROJECT WATERSHED : Cape & Islands  
EOEA NUMBER : 12643  
PROJECT PROPONENT : Cape Wind Associates LLC  
DATE NOTICED IN MONITOR : November 24, 2001

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.03 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of an Environmental Impact Report (EIR).

INTRODUCTION

Project Description

As described in the Environmental Notification Form (ENF), the proposed project involves the development of 170 Wind Turbine Generators (WTGs) on a grid over approximately 26 square miles of sub-tidal area in Nantucket Sound known as Horseshoe Shoals<sup>1</sup>. The project will generate up to 420 megawatts (MW) of electricity. As currently proposed, each WTG will be 263 feet above mean sea level, with a total height up to 423 feet

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<sup>1</sup> The proponent has also proposed an individual data collection tower for the preferred project area. This tower is located outside of Massachusetts waters and requires no cable connection to the mainland. The data tower project is not subject to MEPA. I therefore will not address issues with the data collection tower in this scope. I note that the Massachusetts Office of Coastal Zone Management ("CZM") is reviewing the data tower project under its federal Consistency Review authority.



above mean sea level when rotor systems reach maximum height.

The project also involves development of submarine cables for interconnection of the WTGs; an elevated electric service platform; and placement of two 115 KV submarine and underground cables providing the interconnection of the WTG array to existing NSTAR transmission lines on Cape Cod. The underground cables and portions of the submarine cables are located within Massachusetts or in the waters of the Commonwealth. The WTG array itself is located in federal waters outside the Territorial Sea (but within the contiguous zone).

#### Purpose of MEPA Review

This project represents one of the most ambitious offshore renewable energy projects ever proposed anywhere in the world.

It holds out the promise of making Massachusetts a worldwide leader in offshore renewable energy production. Symbolically and substantively, it is an important step away from our society's crippling dependence on fossil fuels, with all their attendant environmental, social, economic, and political costs. The project would also fulfill a major purpose of the Commonwealth's Electric Utility Industry Restructuring Act (Chapter 164 of the Acts of 1997), which is designed in part to encourage the development of locally produced renewable energy and energy technologies. The project represents the hope for a cleaner and more sustainable energy supply through application of innovative and simple technology. It is my hope that future generations will look back at our decisions at this time as the beginning of a revolution in energy production and use in the Commonwealth. I wish to make it quite clear from the very beginning of the environmental review that this office strongly supports the goal of environmentally sensitive renewable energy.

Nonetheless, no matter how worthy a potential project may be, MEPA imposes a requirement on project proponents to understand and fully disclose the potential impacts of a project, both positive and negative; to study feasible alternatives to a project; and to avoid, reduce, or mitigate environmental impacts to the maximum extent feasible. I intend to conduct a rigorous review of environmental impacts, as laid out in this Certificate. Given the unprecedented nature and scope of the project, it is imperative that the EIR present alternatives

and analyze impacts in a straightforward, transparent manner.

As Secretary of Environmental Affairs, I have a duty to ensure that the MPEA review lays the foundations for a project that is well-planned, well-studied, and well-executed.

By any reckoning, the proposed project has generated significant public interest. Among them, the U.S. Army Corps of Engineers, the Executive Office of Environmental Affairs, and the Cape Cod Commission ("CCC") have held four well-attended formal scoping sessions, as well as informal meetings and two site visits. Few projects in the history of the MEPA program have generated so much written commentary. I have received thousands of letters and e-mails regarding the Cape Wind Project.

Many commenters have written in support and urge expedited approval on clean air and public policy grounds, while others have stated opposition and requested that I deny the project because of potential impacts on Nantucket Sound. Under MEPA, I do not have the authority to approve or deny the project. As part of the MEPA process, I will not make substantive judgments as to the proposed use of Horseshoe Shoals, nor can I act as an agent of appeal or affirmation of federal land use decisions. MEPA is not a zoning process, nor is it a permitting process. Rather, it is a process designed to ensure public participation in the state environmental permitting process, to ensure that state permitting agencies have adequate information on which to base their permit decisions and their Section 61 Findings, and to ensure that potential environmental impacts are described fully and avoided, minimized, and mitigated to the maximum feasible extent.

#### JURISDICTION AND PROCESS

##### Required Permits and MEPA Jurisdiction

The project is undergoing review pursuant to Section 11.03 (7)(b)(4) of the MEPA regulations, because the project involves development of a new electric transmission line greater than one mile in length with a capacity of 69 or more KV. The portion of the project within Massachusetts will require a 401 Water Quality Certificate and a Chapter 91 License from the Department of Environmental Protection (DEP); approval from the Massachusetts Energy Facilities Siting Board

(EFSB); a construction permit from the Massachusetts Highway Department; and an Order of Conditions from the Barnstable and Yarmouth Conservation Commissions (and hence Superseding Order(s) from DEP if one or both local Order(s) were appealed). In addition, the Massachusetts Coastal Zone Management Office (CZM) will conduct Federal Consistency Review of the project, including the portions of the project located in federal waters. The project will require a Section 10 permit from the United States Army Corps of Engineers (the Army Corps is the lead agency in the federal environmental review).

Because the proponent is not seeking financial assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required or potentially required state permits and that have the potential to cause significant Damage to the Environment. In this case, given the broad scope of the Chapter 91 and EFSB permits, MEPA jurisdiction effectively extends to all aspects of the project that are within Massachusetts. The MEPA mandatory EIR threshold related to production of 100 or more MW of electricity does not apply to the project because the WTG is located outside the Commonwealth in federal waters. The portion of the project subject to MEPA does not meet or exceed any mandatory EIR thresholds. Nonetheless, for the reasons discussed elsewhere in this Certificate, I find that the project has potentially significant environmental impacts, and I am thus exercising my discretion in requiring an EIR for the project.

Because MEPA (like the Cape Cod Commission Act) is the product of state law, not federal law, MEPA review (and by extension Cape Cod Commission review) technically applies only to those portions of the project that are located within Massachusetts, including its territorial waters (generally within 3 miles of the low water mark of the shore). I note that the proposed WTG array is located outside of Massachusetts and, therefore, is not subject to state regulatory requirements. CZM has broader jurisdiction because federal law (pursuant to the Coastal Zone Management Act) specifically delegates review authority over projects in federal waters to the Coastal Zone Management Office of the adjacent coastal state, provided that the state has a federally approved Coastal Zone Management Plan.

Nonetheless, despite the jurisdictional limitations on MEPA review, the proponent has voluntarily filed (within the meaning of Section 11.05 (8) of the MEPA regulations) an ENF to allow MEPA review of the entire project, including the WTG array. The proponent has also consented to a greatly extended ENF review period to allow for maximum public input into the scoping process, and to harmonize the timetables for the state and federal environmental reviews. I commend the proponent for these commitments. These commitments ensure that the impacts of the project will receive full disclosure in the state and regional review processes, and they ultimately will facilitate the Consistency Review, as information necessary for Consistency Review can be developed and refined in the EIR process.

The state permitting agencies (with the exception of CZM as described above) must base their permitting decisions and Section 61 Findings upon the portions of the project within Massachusetts. Therefore, in the scope below I have required that the proponent disaggregate the impacts of the project in the state territorial waters and overland from impacts that are occurring within federal waters, since the latter represent the aspects of the project that fall within the "voluntary" nature of MEPA review but lie outside the scope of state and local permitting. I have also included a separate alternatives analysis for state permitting purposes, relating solely to the cable route and its associated impacts.

#### Coordinated Review

In an addition to the EIR requirement, the project will undergo review pursuant to the National Environmental Policy Act (NEPA) in an Environmental Impact Statement (EIS) and review by the Cape Cod Commission (CCC) as a Development of Regional Impact (DRI). The proponent has committed to filing one set of documents that fulfill the requirements of NEPA, MEPA, and CCC. Both NEPA and MEPA regulations allow (and encourage) the preparation of joint EIS/EIR documents. MEPA and CCC have a formal process for coordinated EIR/DRI review pursuant to a Memorandum of Understanding between the agencies. As noted above, I believe coordinated review makes sense, both in terms of allowing for maximum public and agency understanding of the project and to ensure that review by regulatory agencies is as efficient as possible. I therefore

hereby allow the preparation of a joint EIS/EIR/DRI for the proposed project. I anticipate that the Army Corps will soon release its scope to guide the preparation of the EIS. I have written this Certificate to harmonize the state requirements with anticipated federal requirements to the maximum feasible extent.

### EIR SCOPE

#### General

The EIR should follow the general guidance for outline and content contained in Section 11.07 of the MEPA regulations as modified by this Certificate. Because of the coordinated review, I will allow the proponent some flexibility in data presentation. The EIR should contain a copy of each comment letter received, as listed at the end of this Certificate. The EIR need not reproduce every form letter; however, the EIR should include one "template" example of each category of form letter identified.

#### Alternatives

The EIR should include an evaluation of alternative feasible technologies for generating 420 MW of electricity, as well as an assessment of alternative locations for the proposed technology. I have received numerous comments requesting that the proponent be required to study a "universe" of alternative technologies and locations (or similar very broad language), including alternative renewable technologies, some of which have never been demonstrated to be technically or commercially feasible. While I believe a thorough screening analysis is called for, I do not see the need for an EIR-level alternatives analysis for the universe of potential alternatives. I note that several court cases involving NEPA have determined that an EIS need not study alternatives that are "only remote and speculative possibilities," otherwise the EIS process risks becoming an "exercise of frivolous boilerplate<sup>2</sup>." The same principle holds for MEPA review of an EIR as well. I am therefore restricting the MEPA alternatives analysis to those alternatives, discussed below, that meet a reasonable standard of feasibility.

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<sup>2</sup> See Natural Resources Defense Council v. Morton, 148 U.S. App.D.C. 5, 15-16, 458 F.2d 827, 837-838 (1972) and Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 551 (1978)

Clearly, traditional methods of electricity generation are technically feasible alternatives (as evidenced by my recent reviews of several large gas-fired power plants on the Massachusetts mainland). The viability of gas fired electricity production is sufficiently demonstrated so as to warrant inclusion in the alternatives analysis. Note that I am not suggesting it is necessarily appropriate to require selection of a 420 MW gas-fired facility on the mainland as the preferred alternative, simply that it is appropriate to study the environmental impacts of such an alternative during the EIR process. Furthermore, nothing in this Certificate should be read to imply that I believe the capacity of the Massachusetts coast for wind power is limited to the scope of the current project. The point of the EIR alternatives analysis will be to vary the project parameters of reasonable feasible alternatives to disclose relative impacts so that the general public and state agencies can be informed of relative impacts. (An analysis of feasible alternatives will also prove necessary for CZM to make a determination regarding "coastal dependency.")

The EIR should therefore contain a "generic" analysis for a gas-fired mainland power plant with a capacity of 420 MW, to determine such parameters as air emissions, water use, fisheries, avian, visual, and other environmental impacts. The generic discussion should include a coastal gas-fired plant as well as an inland gas-fired plant. For comparative purposes, the EIR should also briefly discuss the impacts of an oil-fired 420 MW plant and a coal-fired 420 MW plant.

The EIR should also include a discussion of alternative locations for a wind facility. The EIR should contain a screening analysis of other potential sites (these may be located in mountainous areas of western Massachusetts, elsewhere on or off Cape Cod, or in other New England states and adjacent federal waters). The EIR should contain sufficient information to understand why the proponent has chosen Horseshoe Shoals and why other sites were deemed infeasible for this particular project. The EIR should contain any alternatives necessary for CZM to conduct its Consistency Review and to determine coastal dependency. I recommend that the proponent consult with CZM to determine the range of alternatives necessary. The EIR should also include any alternatives deemed necessary for study by the federal

government as part of the NEPA review.

The EIR should include an analysis of alternative routes for the submarine and underground cable for the portion of the route within Massachusetts or its coastal waters. This analysis should assume the proponent's preferred location in Horseshoe Shoals for the WTG array. The goal of this analysis will be to provide relevant information for state permitting agencies with Section 61 responsibilities for the project. The analysis should demonstrate that the cable routing minimizes impacts on benthic resources, water quality, submerged aquatic vegetation, and the shoreline environment at the landfall site. The EIR should also demonstrate that the overland route generally minimizes impacts, particularly construction impacts on wetlands and sensitive receptors along the route.

The EIR should also include any alternatives analysis required by the 401 Water Quality Certification process, and any other alternatives analysis required for state permitting purposes.

#### Permitting and Planning Consistency

The EIR should include a brief discussion of each state permit or agency action required for the project. The EIR should demonstrate that the project could meet any applicable performance standards.

As noted above and in the comments from legislative Chairpersons of the Joint Committee on Government Regulations and the Joint Committee on Energy, the project fulfills an important goal of the 1997 Electric Utility Industry Restructuring Act. The EIR should briefly address the goals and requirements of this landmark legislation. The EIR should also address consistency with other state policies concerning energy and sustainability, including the provisions of Executive Order 385 (Planning for Growth). The EIR should also discuss consistency with any local or regional open space or growth plans (I anticipate that the DRI portion of the coordinated document will fulfill the requirement to analyze consistency with local/regional plans.)

#### Environmental Impacts

As noted above, the impacts from the array of WTGs within the

proponent's preferred location lie outside the boundaries of the Commonwealth. I will therefore defer the detailed scoping of environmental issues associated with the WTG array itself (e.g., the necessity for detailed mapping of the Horseshoe Shoals substrate or the use of specific technology to track bird usage of the area) to the federal government. However, the EIR should address the issues outlined below, to the extent that these issues are not addressed in the federal scope. (Of course, the EIR should also address any impacts in any of the following categories that fall within the jurisdiction of the Commonwealth, regardless of the requirements of the federal scope.)

#### Avian Impacts

The EIR should include a thorough assessment of impacts to birds. If the proponent prepares a formal risk assessment, any subjective inputs should be clearly identified and appropriate sensitivity analyses included.

The ENF claims that impacts to birds from the proponent's preferred alternative should prove minimal, and that bird use of the area is low. However, these conclusions seem premature, and the EIR should contain much greater analysis to support the conclusions drawn. The EIR should focus on impacts to three categories of birds: migratory songbirds, wintering seaducks, and rare and endangered birds including Roseate and Common Terns and Piping Plovers.<sup>3</sup>

There are few operational offshore WTG arrays in the world, and none nearly the size of the proposed project. Therefore, there is a considerable amount of uncertainty in gauging potential impacts on birds. It is thus essential that the EIR present as much pre-construction data as possible on the spatial and temporal characteristics of avian activity in the Horseshoe Shoals area. The EIR should also present enough information on other alternatives studied to enable a meaningful comparison of impacts among the alternatives studied (I recognize that full-scale long-term study of all potential alternative sites may not prove feasible).

Since the WTG array is located outside of the boundaries of

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<sup>3</sup> The Roseate Tern is endangered at both the state and federal level. The Piping Plover is threatened at both the state and federal level. The Common Tern is a state Species of Special Concern.



Massachusetts, it is highly unlikely that the project would result in the "take" of a state-listed species within the meaning of the Massachusetts Endangered Species Act.

Nonetheless, I am concerned about potential impacts to rare Massachusetts birds. I note that the EIS will include a biological assessment for purposes of the federal Endangered Species Act (ESA). Since the Common Tern is not a federally listed species, the ESA assessment may not include impacts to the Common Tern. I request that the proponent include a comparable biological assessment for the Common Tern in the EIR.

The Massachusetts Audubon Society has noted a particular concern for heightened mortality from unusual events, such as storms. The EIR should develop potential methods of assessing impacts from such events, and consider a range of management responses to reduce bird mortality.

The EIR should also assess impacts to birds from lighting of the WTG array (see below under visual impacts for further discussion of lighting impacts). The EIR should develop a monitoring plan to gauge impacts post-construction, and develop appropriate action thresholds and mitigation if monitoring reveals a problem.

#### Fisheries Impacts

The EIR should include an assessment of impacts on fisheries (both commercial and recreational), with particular focus on potential impacts to fisheries habitat. The EIR should also assess potential indirect impacts caused by changes in water movement and sediment transport from placement of the WTG monopiles. The EIR should disclose whether armoring is proposed at the base of monopiles, and should evaluate potential impacts (both positive and negative) from the introduction of these "artificial reefs" in the Horseshoe Shoals area.

The EIR should describe existing habitat conditions in Nantucket Sound, and identify fish species and types expected to occur in the project area. The EIR should also describe the temporal characteristics of the species present (i.e., what life stages of the various species are likely to be encountered, and at what times of year). The EIR should evaluate the potential impacts of the WTG array and associated

cables (construction, operation, and maintenance) on benthic habitat and species composition and relative abundance in the project area. This analysis should include any impacts related to specific life stages of effected species.

### Visual

The visual impacts of the project have been mentioned more than any other issue among comments received in opposition. Even many comments strongly supportive of the project recognize the change in the appearance of Nantucket Sound if the project proceeds at the proposed location. (Whether the WTG array will be beautiful or ugly has been hotly debated, but such a subjective issue lies beyond the scope of the environmental review process.)

The ENF includes visual projections from several vantage points on the Cape and Islands. The Massachusetts Historical Commission (MHC) has identified numerous historic resources within the project viewshed. The resources are sufficiently well spaced and geographically representative of the project area as a whole such that analyzing the visual impacts on historic resources will capture a good sense of the overall visual impacts of the project. Therefore, the EIR should include a visual assessment (including additional computer-generated photographic simulations) for the locations specified in the MHC comment letter, including:

- ? The Cotuit, Wianno, Centerville, Craigville, and Hyannis Port districts in Barnstable
- ? The South Yarmouth/Bass River Historic District in Yarmouth
- ? Monomoy Point Light in Chatham
- ? Edgartown Village Historic District, Cape Pogue Light, and Edgartown Harbor Lighthouse in Edgartown
- ? Martha's Vineyard Campground Historic district and East Chop in Oak Bluffs
- ? Nantucket Island National Historic Landmark, including Nantucket Village, Crooked Record, Monomoy and Wocuwinet areas, and the Nantucket Cliffs
- ? Tuckernuck Island

In the case of historic districts, the EIR need not analyze visual impacts from every individual property within the district, but should select a representative site within the district that has an unobstructed view of the WTG array relative to the other properties in the district. For districts and individual properties with frontage along the water, the simulations should occur as viewed from the water's edge looking toward the WTG array.

The EIR should also include an analysis of visual impacts from lighting. The EIR should discuss any federal lighting requirements (particularly requirements of the Federal Aviation Administration and United States Coast Guard). The EIR should also discuss whether any flexibility exists in terms of lighting colors, intensity, orientation, and/or flash frequency and duration. The EIR should evaluate any trade-offs between safety considerations and visual impacts on Massachusetts landforms (as well as impacts on birds, per the above discussion).

#### Noise

The EIR should include an analysis of noise impacts from the project. The EIR should analyze whether noise from the project (as measured on the A-weighted scale and by octave bands) will be measurable above background noise from the nearest representative locations along the south coast of Barnstable and Yarmouth and the east coast of the Vineyard. The EIR should also model noise impacts as measured from the base of the monopiles. For informational purposes, the EIR should also address the ability of the project to meet the performance standards contained in the DEP Noise Policy (DAQC Policy 90-001).

The EIR should also evaluate the potential impacts of underwater noise and vibrations from the WTG array, with analysis of potential biological and ecological effects from a change in the noise environment.

#### Rare Species

In addition to potentially effecting rare birds, the project may have impacts on the habitat of the Grey Seal, a state Species of Special Concern. The EIR should discuss potential impacts on the Grey Seal, and any other potential impacts on

marine mammals, including the several species of state-endangered and federally-endangered whales known to transit Nantucket Sound.

#### Land Alteration

The EIR should quantify the amount of land disturbed, both land under water/salt marsh and uplands/inland wetlands. The EIR should discuss the resources present in lands proposed for alteration, including benthic resources, archaeological resources, and vegetation.

#### Wetlands/Drainage

The EIR should include a reasonably scaled map that delineates wetland boundaries and buffer zones present in the project area. The plans should also note any applicable local buffer zone requirements. The EIR should explain the significance of each wetland area to the interests enumerated in the Wetlands Protection Act. For each alternative, the EIR should quantify the amount of direct wetland alterations proposed. Eelgrass beds are present in Lewis Bay near the proposed cable route. The EIR should include a demonstration that the proposed routing avoids or minimizes impacts to eelgrass beds and other submerged aquatic vegetation.

#### Water Quality

The EIR should address the water quality impacts of the project, including impacts from the proposed jet plow method of embedding the submarine cables. The EIR should also discuss impacts at the land fall site, and maximize the use of horizontal directional drilling in this area to minimize impacts. The EIR should also address any informational requirements of the Water Quality Certification process.

#### Chapter 91/Public Trust

The EIR should include an analysis of the project impacts on lands subject to the Massachusetts Public Trust Doctrine. The document should discuss potential impacts on navigation and

anchorage within the state Territorial Sea, and should discuss any impacts on public access to Chapter 91 lands.

The submarine cables qualify as an infrastructure crossing facility under the state Waterways Regulations. DEP must consider an infrastructure crossing to be non-water dependent (and thus categorically prohibited) under the Waterways Regulations unless I make a determination, as part of the EIR review, that the cable cannot reasonably be located or operated away from tidal or inland waters (see 310 C.M.R. 9.12(2)(d)). The EIR should therefore include sufficient information for me to make a determination pursuant to the applicable regulations.

The EIR should also discuss any federal public trust implications of the project. The EIR should include discussion of impacts to recreational/commercial fishing and boating, and public access in general, in the area proposed for the WTG array.

#### Federal Consistency

As noted above, CZM jurisdiction extends over all aspects of the project. The EIR should address the concerns of CZM, and provide sufficient information to facilitate the federal Consistency Review. The EIR should also address the applicable specific policies of the Massachusetts Coastal Zone Management Plan, including: Energy Policy #1; Habitat Policy #1; Coastal Hazard Policies #1 and #2; Ports Policy #3; Public Access Policy #1; Ocean Resources policies #1, #2, and #3; and Growth Management Principle #1.

#### Historic/Archaeological Impacts

As noted above under visual impacts, the EIR should assess visual impacts on the various historic districts and properties identified by MHC in the project viewshed. In addition, the EIR should evaluate any impacts on historic resources along the overland cable route.

Underwater areas of the proponent's preferred project area (and potentially some alternative areas) have high sensitivity for archaeological resources. The EIR should analyze potential impacts on underwater archaeological resources (both shipwrecks and now-submerged prehistoric cultural artifacts).

I strongly recommend that the proponent consult with MHC and the Massachusetts Board of Underwater Archaeological Resources to develop an appropriate scope for these studies.

Decommissioning Plan

The EIR should include a plan to remove the turbines, towers, cables, and other infrastructure in the event that the project ceases operation. The EIR should discuss the funding mechanism for the decommissioning plan, and should outline the steps that would be taken to ensure minimization of environmental impacts during removal of structures.

Construction Period

The EIR should include an analysis of construction period impacts, including impacts at the landfall site and impacts associated with the proposed jetplow trenching method. The EIR should address construction impacts from the overland route as well, and address any concerns of the Massachusetts Highway Department for the work done within the state highway layout.

Comprehensive Environmental Monitoring Program

Given the project's uniqueness, a considerable degree of uncertainty exists surrounding project impacts post-construction. To obtain meaningful data on impacts (and to aid in potential future environmental reviews of offshore WTG arrays both here and elsewhere), the EIR should outline a Comprehensive Environmental Monitoring Program (CEMP). For a good recent example of the structure and goals of a CEMP, I note the ongoing development of a CEMP for the Maritimes/Hubline Project (EOEA #12355).

Comments and Circulation

The EIR should include a copy of each comment received. The EIR need not reproduce every form letter, but should include one "template" from each form letter category noted below. The EIR should respond to the substantive comments received, including the substantive issues raised in the form letters. The proponent should circulate a hard copy of the EIR to each state agency from which the proponent will seek permits or approvals. The proponent should also circulate a copy of the EIR to those submitting individual written comments, as listed below.

To save paper and other resources, I will allow the proponent to circulate the EIR in CD-ROM format to individual commenters, although the proponent should make available a reasonable number of hard copies available on a first come, first served basis, to accommodate those without convenient access to a computer. I do not consider those who submitted form letters to be "commenters" within the meaning of Section 11.16(3) of the MEPA regulations. Nevertheless, in the interest of broad public dissemination of information, the proponent should send a notice of availability of the EIR (including relevant comment deadlines, locations where hard copies may be reviewed and electronic copies obtained, and appropriate addresses) to those who submitted form letters, if (e-mail) addresses are available. This notification may take the form of electronic notification, as most form letters were submitted via e-mail.

#### Mitigation

The EIR should include a summary of all mitigation measures to which the proponent has committed. The mitigation summary should serve to form the basis of the proposed Section 61 Finding to be presented in the Final EIR.

April 22, 2002

Date

\_\_\_\_\_  
Bob Durand

[list of commenters deleted]

BAD/ASP/asp



**MINERALS MANAGEMENT SERVICE**  
**International Activities and Marine Minerals Division**  
**381 Eiden Street, Mail Stop 4030**  
**Herndon, Virginia 20170-4817**  
**Tel: 703-787-1300**  
**Fax: 703-787-1284**  
**Email: [barry.drucker@mms.gov](mailto:barry.drucker@mms.gov)**

**NOTE**

**Date:** March 20, 2002  
**To:** Karen Adams  
**From:** Barry Drucker  
**Subject:** Windfarm Project Purpose and Need

I have reviewed the project purpose and need material for the proposed Windfarm project faxed to me by Brian Valiton and offer the following comments and observations:

The information presented for the project purpose and need, as of now, reads like an advertisement for the Windfarm project. In fact, it almost sounds like an endorsement for the project. This is not the place to present a justification for putting a Windfarm in-place. In fact, some of the items mentioned in the first paragraph are impact-producing factors which will be evaluated in the EIS itself (air quality effects, greenhouse gases, etc.)

The purpose and need statements do not have to be long. In fact, they should be short, concise, and to-the-point. The 3<sup>rd</sup> paragraph within the quoted portion contains the kind of information that should form the basis for the project purpose statement. It should describe what the applicants want to do, why they want to do it offshore, and at least give some indication of the magnitude of the project.

The need should address what is seen as the need for the power generated by the proposal, either based on a shortfall in local supplies, or in the fact that power is expensive in the area and this would make it available to customers for less, or to more customers who can't afford it now.

The proceeding task of identifying and scoping out the alternatives should be carried out with caution. It is important to remember that the range of alternatives and the purpose and need statement are relative to each other. The purpose and need should not be modified such as to be so narrowly defined that one alternative, an endorsement of the project, is the only alternative besides the no-action presented.





If you have any questions concerning these comments, please do not hesitate to contact me. Unfortunately, I still do not have access to email at work, so phone or fax are the only options there. Feel free to send email to my home email address: [bdrucker@comcast.net](mailto:bdrucker@comcast.net).

Barry Drucker

cc. Carol Hartgen  
John Mirabella



# CAPE COD COMMISSION

3225 MAIN STREET  
P.O. BOX 226  
BARNSTABLE, MA 02630  
(508) 362-3828  
FAX (508) 362-3136

E-mail: [frontdesk@capecodcommission.org](mailto:frontdesk@capecodcommission.org)

March 28, 2002

Ms Karen Kirk Adams  
Chief, Permits and Enforcement Branch  
U.S. Army Corps of Engineers, Regulatory Division  
New England Division  
696 Virginia Road  
Concord, MA 01742-2751

RECEIVED

APR - 1 2002

REGULATORY DIVISION

**RE: Cape Wind Energy Project – Project Purpose and Need.  
US ACOE File #:200102913**

Dear Ms Adams:

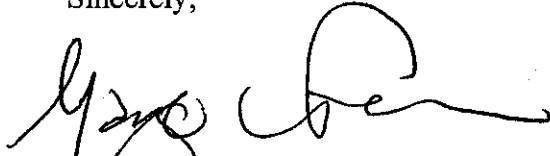
Thank you for your memorandum seeking input on the project purpose and need for the Cape Wind Environmental Impact Statement (EIS). The Cape Cod Commission has not formally reviewed this material, however, the Commission staff have reviewed the applicant's statement that the project's purpose is "to generate up to 420MW of clean, renewable wind-generated energy that will be transmitted and distributed to the New England regional power grid, including Cape Cod." Commission staff believe that this statement of project purpose is too specific to allow a reasonable range of alternatives to be studied under the EIS.

As all reasonable alternatives examined in detail in the EIS must meet the defined project purpose, Commission staff believe that a more general statement is appropriate. Therefore, we would recommend that the statement be edited to state that the project's purpose is "to generate clean, renewable energy to be transmitted and distributed to the New England regional power grid." We believe that this more clearly states the underlying purpose to which the agencies reviewing this application are responding.

Finally, your memorandum included a section of the applicant's project introduction, which contains a number of unsubstantiated claims. We would agree with your statement that further data is needed to explain these conclusions and that the claims made would need to be fully supported by analysis in the joint Draft EIR/EIS for the project.

Thank you for the opportunity to comment and participate in the development of the EIS for this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Margo Fern', written over a circular stamp.

Margo Fern,  
Executive Director

cc: Leonard Fagan, Cape Wind Associates, LLC, 75 Arlington Street, Suite 704,  
Boston, MA 02116.  
Charlie Natalie, ESS Inc., 888 Worcester Street, Suite 240, Wellesley, MA 02482  
Arthur Pugsley, MEPA Analyst, Executive Office of Environmental Affairs, 251  
Causeway Street, Suite 900, Boston, MA 02114  
Tim Timmerman, EPA-New England, Region 1, 1 Congress Street Suite 1100,  
Boston, MA 02114-2023

**Adams, Karen K NAE**

---

**From:** Mead, Jane (ENV) [Jane.Mead@state.ma.us]  
**Sent:** Friday, March 29, 2002 10:39 AM  
**To:** Valiton, Brian E NAE; Tim Timmermann (E-mail); Arthur Pugsley (E-mail); Eric Hutchins (E-mail); Terry Fleiger (E-mail); Phil Dascombe (E-mail); Sharon Pelosi (E-mail); Albert Benson (E-mail); Stephanie Morrison (E-mail); Karen K NAE Adams (E-mail)  
**Cc:** Skinner, Thomas (ENV); Truman Henson (E-mail); Babb-Brott, Deerin (ENV)  
**Subject:** RE: Wind Farm Purpose & Need

CZM concurs with the comments provided by the Minerals Management Service on the attached statement of purpose and need. Based on the material that has been provided by the applicant, we would suggest the following statement of purpose and need:

The purpose of the proposed project is to generate electricity from renewable sources, specifically wind, for sale to the New England power grid. Renewable sources of energy are needed to provide additional power to meet demand and to reduce dependency on non-local, non-renewable energy sources. Wind energy is particularly appropriate as a renewable energy source because it is non-polluting, resulting in significant air-quality and public health benefits.

-----Original Message-----

**From:** Valiton, Brian E NAE [mailto:Brian.E.Valiton@nae02.usace.army.mil]  
**Sent:** Monday, March 18, 2002 10:10 AM  
**To:** Tim Timmermann (E-mail); Jane Mead (E-mail); Arthur Pugsley (E-mail); Eric Hutchins (E-mail); Terry Fleiger (E-mail); Phil Dascombe (E-mail); Sharon Pelosi (E-mail); Albert Benson (E-mail); Stephanie Morrison (E-mail)  
**Cc:** Adams, Karen K NAE; Charles Natale (E-mail); Terry Orr (E-mail)  
**Subject:** Wind Farm Purpose & Need

<<wfpurpose&needmar2002.doc>>

Memo on behalf of Karen Adams on Wind Farm Purpose and Need

4/26/2002



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Field Office  
70 Commercial Street, Suite 300  
Concord, New Hampshire 03301-5087



April 1, 2002

Colonel Brian E. Osterndorf  
District Engineer  
U.S. Army Corps of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01742-2751

Dear Colonel Osterndorf:

This responds to your January 23, 2002 letter and Federal Register Notice (67 FR 4414) requesting scoping comments on the proposed Cape Wind Energy Project, Nantucket Sound and Yarmouth, Massachusetts.

### General Comments

By letter dated December 31, 2001, the Service provided preliminary scoping comments to Secretary Robert Durand on the expanded Environmental Notification Form for the Massachusetts environmental review process for the Cape Wind Project. We hereby incorporate our December 31, 2001 comments (copy enclosed) into these scoping comments as they were prepared with the intent of serving as scoping comments for a joint MEPA/NEPA process. Mr. Brian Valiton of your staff was provided a copy of the December 31, 2001 comments at the time they were issued to help insure an orderly coordination and scoping process.

Rather than reiterate the issues we raised in our December 31, 2001 letter to Secretary Durand, we would like to use this opportunity to focus on the fact that we believe the siting proposal by Cape Wind on outer continental shelf lands may benefit from a two-step evaluation process similar to that for oil and gas development. The first step should include a broad-based zoning or master planning analysis of the OCS lands off the New England coast to determine which lands and waters are environmentally suitable for potential development for wind, wave, and perhaps other forms of energy development. The second step would involve a detailed evaluation of those areas which are potentially suitable for projects like the Cape Wind Energy proposal.

### Specific Comments

The lands on which the Cape Wind Energy Project would be situated are part of the federal outer continental shelf. Currently, we are unsure if any federal agency has the authority to lease or convey use of these lands for the development of an energy facility. This issue notwithstanding, it would be a more efficient and informative NEPA process if the alternatives analysis could step back and analyze the OCS lands off the New England Coast using a variety of siting and evaluation criteria and determine which areas of the OCS would be environmentally suitable for the development of offshore wind, wave, and perhaps other energy resources. This threshold examination would facilitate meeting the federal public trust responsibility by providing a public process in which decisions about zoning and uses of the OCS are made. Unfortunately, the Corps Notice of Intent on the Cape Wind Energy Project speaks only to the evaluation of alternative sites on Nantucket Sound, not to the broader public policy issue involving zoning and land use planning to identify appropriate uses of federal trust property and related trust resources. Without this important threshold step, the Corps, EOE, cooperating agencies, and others cannot adequately examine a reasonable range of alternative sites for wind energy development on the OCS. For instance, absent the above broad scale siting and evaluation process, we would have no way of knowing whether or not Nantucket Sound would be determined to be an acceptable OCS area for potential development as a wind resource area. By moving forward as proposed in the Notice of Intent, the EIS process creates the presumption that Horseshoe Shoal and other Nantucket Sound sites are reasonable alternative sites for wind energy development when, in fact, they may not be suitable.

Accordingly, the Service believes the Corps should step back and conduct a zoning and siting evaluation of the OCS lands off the New England Coast for wind and wave energy development, using an open public process, as a necessary first step to create a more efficient NEPA process. The results of the zoning and siting evaluation should then be used to select reasonable alternative ocean sites (which may or may not include Nantucket Sound) for wind and wave energy development.

The range of alternatives in the EIS will clearly be affected by the manner in which the project purpose and need are defined. The Corps should define the project purpose and need more broadly than the applicant's stated purpose. We believe the project purpose should be defined as the production of electricity for use in the New England power grid. Under this broader project purpose, the alternatives in the EIS would need to include all reasonable generation sources, not just renewable energy; various sizes of generation capacity, not just a 420 mw-sized facility; and generation locations encompassing the entire New England Power grid, not just the Cape Cod area.

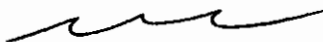
The Corps should consider utilizing a tiering concept to screen the universe of alternative generation sources, sizes and locations into smaller and smaller pools to get to a short list of reasonable alternatives. The Corps, EOE, and the cooperating agencies should commit to developing screening criteria to tease apart the reasonable alternatives from the larger group of potential alternatives.

Regarding the search for alternative generation sources, sizes and locations, the EIS will need to examine the need for power in the New England power grid, consider whether excess capacity exists with existing facilities and whether excess capacity exists with approved but not yet constructed facilities. This analysis should also consider the various regional expansion projects associated with the Sable Island, N.S. natural gas field such as the proposed Neptune offshore direct current power line and an as-yet unnamed offshore natural gas pipeline that would serve various New England cities and the New York-New Jersey area. Other projects under consideration for development or decommissioning could also affect the need for power and the economics of various generation sources on the regional grid.

We anticipate that information on recently proposed, approved, or constructed energy projects including generation sources, sizes and locations could be obtained from the various state energy and planning offices, public utility commissions, energy facility siting board(s), and from the New England Power Pool. This recent market information should provide useful data for determining what constitutes a viable commercial scale facility within the various generation sources as well as providing data on total capacity of the various generation sources or categories in the New England power grid, e.g., natural gas, renewables, etc.

I am sure you will agree that getting the alternatives analysis properly framed is one of the biggest challenges facing the Corps, EOE, and the cooperating agencies. The fact that both public property and resources are proposed for privatization with this first-of-its-kind large scale wind energy development makes the task more daunting. Should you have questions about these scoping comments, feel free to contact me or Mr. Vern Lang of this office at 603-223-2541.

Sincerely yours,



Michael J. Bartlett  
Supervisor  
New England Field Office

Enclosure

CC: Reading File  
R. Dettmers, RO-MB  
K. O'Brien, LE-NH  
B. Valiton, US ACOE  
T. Timmermann, US EPA  
G. Smith, RO-SE  
B. Oliveira, GMNWR  
D. Rothstein, DOI-SOL  
P. Colosi, NMFS  
A. Raddant, DOI-OEPC  
B. Drucker, DOI-MMS  
A. Hoar, RO-ES  
H. Roddis, MA Audubon  
H. Heusmann, MADFW  
T. Orr, ESS  
M. Amaral, NEFO  
P. Morrison, NEFO  
M. Bartlett, NEFO  
W. Neidermyer, NEFO  
BFA-ERT  
OEPC  
ES: VLang:jd:4-1-02:603-223-2541





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION 1**

**1 CONGRESS STREET, SUITE 1100  
BOSTON, MASSACHUSETTS 02114-2023**

OFFICE OF THE  
REGIONAL ADMINISTRATOR

April 5, 2002

Colonel Brian E. Osterndorf  
District Engineer  
United States Army Corps of Engineers  
696 Virginia Road  
Concord, Massachusetts 01742-2751

RE: Cape Wind Project Draft Environmental Impact Statement Scoping Comments

Dear Colonel Osterndorf:

EPA New England appreciates the opportunity to comment on the scope of analysis for the preparation of a Draft Environmental Impact Statement (DEIS) for the Cape Wind Associates, LLC (Cape Wind) proposal to construct a wind-powered electrical generation facility (wind farm) in Nantucket Sound off the coast of Cape Cod, Martha's Vineyard and Nantucket. Based on the applicant's information, we understand that the project will feature 170 wind turbines spread across 28 square miles of Nantucket Sound that would produce up to 420 megawatts of energy. The 426 foot tall turbines would produce energy that would be transmitted via submarine cables to an electrical service platform where it would be converted and transferred to Cape Cod via two 115KV submarine cables. While preparing these comments, EPA has reviewed applicant-generated information contained in its application to the Corps of Engineers (Corps) for Section 10 authorization and recent comments offered by a number of state and federal agencies, as well as the public. This letter sets forth our specific concerns about the scope of analysis for the DEIS.

EPA commends the Corps for deciding early on that an EIS should be prepared pursuant to the National Environmental Policy Act (NEPA) to support decision-making regarding the Cape Wind proposal to construct a wind farm in Nantucket Sound. That decision paves the way for a comprehensive analysis of this challenging and precedent-setting project. In addition, EPA fully supports the efforts of the Corps and the Massachusetts Executive Office of Environmental Affairs to integrate their respective reviews within a combined DEIS/DEIR under NEPA and Massachusetts Environmental Policy Act (MEPA). This joint review should improve the public review process and streamline the environmental review for the project.

The Corps-sponsored scoping sessions were well attended and featured a valuable transfer of questions, concerns and suggestions about both the project and the types of information that should be included in the DEIS/DEIR. Discussion at each meeting demonstrated significant public interest in a comprehensive evaluation. Continued interagency coordination across

617-918-1010

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federal, state and local jurisdictions will be critical for ensuring that the DEIS/DEIR adequately informs the various regulatory reviews that will follow.

As you know, the generation of electricity from fossil fuels is the single largest industrial source of air pollution in New England. Because of these fossil-fuel power plant emissions, New England continues to experience too many days of unhealthy air and too much degradation of the environment, including acidification of lakes and streams, mercury deposition, visibility impairment, greenhouse gas emissions, and excessive nitrogen loading to our ecosystems. In addition, apart from air emissions, fossil fuel burning power plants can cause environmental harm from their withdrawal of cooling water from, and their discharge of heated water to, the region's waterways. There are also many adverse environmental impacts associated with the extraction, refining and transportation of fossil fuels to be used in the New England market. Consequently, EPA New England strongly supports an increase in the amount of electricity generated in the region from renewable resources such as wind power. However, no shift to renewable energy, either through the development of this or any other project, can be made without a complete understanding of the environmental impacts and tradeoffs associated with each alternative.

EPA looks forward to coordinating with the Corps and other local, state and federal interests as work is done to determine the appropriate scope of analysis for the project and as specific investigations are developed to gauge the level of impact associated with each alternative under consideration. Off-shore wind farm operations, such as the one proposed by Cape Wind, raise a number of public policy concerns and environmental questions that must be carefully addressed. These issues are summarized below.

### **Determination of the Range of Alternatives**

The Council on Environmental Quality's (CEQ's) regulations implementing NEPA at 40 CFR Part 1502.14 explain that a reasonable range of alternatives should be presented and compared in the DEIS to allow for a "clear basis for choice among options by the decision maker and the public." Moreover, CEQ's "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" explain that "Section 1502.14 requires the DEIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant."

Framing an appropriate purpose and need statement is a key element in the development of a range of alternatives for analysis, as the alternatives flow directly from it. The proponent's application states that the project's purpose is "to generate up to 420 MW of clean, renewable wind-generated energy that will be transmitted and distributed to the New England regional power grid, including Cape Cod and the Islands...." While we think the applicant's proposed

purpose statement is a good starting point, we recommend it be modified to make it less constraining for the purposes of the NEPA analysis and determining the range of alternatives to be investigated in the DEIS/DEIR. As a starting point, we suggest that the purpose statement be modified by striking the words "clean" (as it is somewhat vague and open to interpretation) and "wind-generated" (too limiting) and the phrase "including Cape Cod and the Islands..." (as a geographic aspect is implied in the New England Power Grid component of the statement). Finally, we suggest that specific reference to a particular size for the project be dropped from the purpose statement and that it be replaced with language descriptive of a commercially viable renewable energy facility. With these changes, the basic project purpose statement would read, "The project's purpose is to develop a commercially viable renewable energy facility that will generate electricity distributed to the New England regional power grid."

EPA looks forward to working with the Corps and other federal agencies in a cooperative fashion to establish an appropriate basic project purpose through the Highway Methodology Process. The characterization of need provided by the applicant should be fully supported by the analysis provided in the DEIS/DEIR. Following that step, the agencies should work closely to agree on an acceptable range of alternatives to be considered in the DEIS/DEIR. At this point the range of alternatives could include renewable energy generation from a number of sources of different sizes/generation capacities, both on and offshore, or combinations of sources/types of facilities, that would supply power to the New England power grid. The analysis should fully analyze the rate of development of new wind technology and the likelihood that currently infeasible alternatives may become feasible in the near future (e.g., placement of turbines in deeper waters). The alternatives list would also, of course, include the applicant's proposal as well as the No-Build scenario.

### **Analysis of Alternatives**

Once a complete list of alternatives is identified, the Corps should consider developing an interagency work group (including federal and state participation) to develop screening criteria, tailored to this case and linked directly to the statement of purpose and need, that will support decisions to eliminate or retain alternatives for additional analysis in the DEIS/DEIR. As alternatives advance through the screening process we expect that increasing levels of information and analysis will be necessary to evaluate tradeoffs and to support decision-making.

The Corps' analysis of alternatives will require a thorough and independent examination of the applicant's claims regarding a number of factors including:

- project size and proposed site;
- project need;
- potential benefits;
- potential costs/impacts; and,
- renewable energy technology.

At this point, the economics of the project are poorly understood and a greater level of information will be necessary to evaluate the proposed alternative as well as other alternatives that could achieve the project purpose. The discussion of alternatives should include the impact on electricity rates in New England and a discussion of fuel diversity, and the potential for future supply constraints, reliability problems, and price increases associated with over-reliance on a particular fuel source.

A thorough assessment of the relative environmental tradeoffs of each alternative should be provided in the DEIS/DEIR. As you know, the record is brimming with a wide range of important and thoughtful comments offered by our federal and state colleagues as well as by industry groups and the public. Each of these comments must be carefully considered during the development of the scope for the DEIS/DEIR. At this point in the scoping process the list of potential impacts that should be addressed is lengthy. While we recognize that the consideration of impacts must be tailored for each alternative under consideration, it currently appears that the list of issues to be explored includes: avian impacts, marine impacts (to recreational and commercial fisheries, marine mammals, benthic habitat, circulation, physical conditions, and overall ecology), visual impacts, noise and vibration impacts, aviation impacts, impacts to communication/transmission networks, commercial and recreational navigation/use, and direct and secondary impacts to the local/regional economy (recreation, tourism, fishing, coastal property values, etc.).

The analysis should discuss the environmental benefits/avoided impacts of alternatives under consideration when compared to each other and to other forms of non-renewable energy production. For example, the discussion should include avoided upstream environmental impacts associated with the mining of coal, the drilling for oil and natural gas, the refining of petroleum, and the transportation of these materials to New England. Other issues that should be part of the comparison include hazardous material usage and storage, thermal loads associated with fossil fuel fired plants, and the potential for impacts such as impingement and entrainment of fish and larvae in cooling water intakes at fossil fuel-fired plants. In addition, the analysis should describe the situations where an alternative might displace other forms of energy generation and the relative impacts/benefits of such a shift in energy production.

The DEIS/DEIR should establish a baseline from which impacts of the project alternatives can be discerned and evaluated. The same baseline information should then also be used going forward to evaluate the impacts of any project that may be constructed. The tradeoff analysis should also consider emissions offsets from criteria pollutants and CO<sub>2</sub> and the relative environmental costs incurred and avoided from the development of various forms of renewable energy. The tradeoff analysis should also address the environmental and societal impacts of climate change on the ecosystems being studied in the course of developing the EIS, and the incremental role that each renewable carbon-neutral energy generation project can play in mitigating those impacts. During the course of a recent interagency discussion, the Corps suggested that "topic specific" working groups would help focus the discussion on particular issues as the DEIS/DEIR is developed. We think this idea has merit and should be pursued.

## **Public Trust Issues**

The DEIS/DEIR must fully consider the public trust implications of siting a facility in federal waters. The proposed wind farm would spread across 28 square miles of Nantucket Sound. With the exception of two transmission cables and a portion of a proposed "wind wake buffer zone," the project will be located beyond the three mile limit of state waters in federal waters on the outer continental shelf (OCS). Increasing public concern has focused on the lack of an established process (exclusive of the Corps Rivers and Harbors Act Section 10 authority) through which the federal government can effectively deal with a number of precedent setting issues associated with the proposed project. These include but are not limited to: the lack of existing policy and regulation dictating which agency has authority over siting issues, whether competition should exist for development sites, how/whether easements/leases/fees should be required for the use of public property and its resources by a private corporation, and what sort of requirements should be imposed to ensure proper site restoration and management after the useful life of the project ends. These issues grow in importance as we learn about other proposals for offshore energy projects in New England and other coastal areas of the United States.

EPA, NOAA, and the Corps, among others, are participants in a Department of Interior working group focused on possible modifications to the Outer Continental Shelf Lands Act (OCSLA) that would address transmission of energy projects and renewable energy development on the OCS. To date, draft language for possible legislation focuses on the granting of easements/rights-of-way and the establishment of "fees to assure [that the public receives] fair market value for rights conveyed." The preliminary considerations also contemplate competitive or non-competitive granting of easements/rights-of-way. The DOI efforts are timely and each of these issues remains ripe for analysis in the DEIS/DEIR. Moreover, heightened public interest in the project warrants the establishment of clear public policy to fill the "gap in the process" in advance of decision-making that will follow the NEPA process. If this does not occur in a timely fashion outside the NEPA process, the Corps will need to thoroughly explore these public policy issues in the DEIS/DEIR.

The Cape Wind project is the first of what appears likely to be a number of proposals to develop renewable energy facilities off the coast of New England. We believe these projects, if properly sited to avoid impacts, may offer a tremendous opportunity to New England in moving toward a more sustainable and more diverse energy future. Given these implications, it is all the more imperative that the public trust issues raised by such projects be resolved thoughtfully and quickly. It is our belief that the project should not proceed through the permit process absent

serious analysis of this private use of public trust resources for renewable energy development on the OCS. Several strategies to deal with the existing policy void are apparent:

- The Corps could proceed with the current DEIS/DEIR analysis in a manner that fully incorporates the results of ongoing decision-making of the interagency work group and/or subsequent legislative action;
- In recognition of the pressing need for clear public policy on this issue, and in view of the fact that multiple wind power proposals are under consideration for New England offshore waters, the Corps or another appropriate agency (e.g. the Department of the Interior) could develop a programmatic EIS that takes a comprehensive look at potential sites for offshore renewable energy development and provides information that can then be used for site specific applications for individual projects;
- The Corps could proceed with the DEIS for this project absent an external process to deal with the lack of clear policy—in this instance the Corps would conduct its own comprehensive investigation of public trust issues associated with the project and its alternatives.

We believe that an analysis with no consideration of public trust issues and absent any national policy/regulation that governs the use of OCS lands for renewable energy generation is not an appropriate option. EPA is concerned with the lack of policy/regulation and recommends that the agencies meet to discuss the various options to develop an appropriate strategy. We also recommend that the Corps consider coordinating with the Council on Environmental Quality on this challenging issue. EPA looks forward to reviewing the Corps' draft scope of work for the DEIS with particular attention to this fundamental issue and to future discussions about the merits of various approaches.

### **Coordination/Communication**

Close interagency coordination throughout the preparation of the DEIS/DEIR is critical. To that end, EPA intends to work as a cooperating agency to help define the scope of analysis and to offer input on how specific issues should be addressed in the DEIS. We encourage the Corps to keep an open dialogue with local, state and federal agency representatives throughout the process, with particular attention to agencies such as the Cape Cod Commission that have a long history representing the interests of the resident population that feels it would be most impacted by the applicant's proposed project. The communication strategy should include updates on the DEIS at important milestones, as public policy around the use of the OCS evolves, and should consider the release of relevant study findings as they become available. The work by the Corps so far during the scoping process bodes well for an open public process.

Finally, we suggest that the Corps distribute a draft of the final scope for the DEIS to the interagency group to make sure that there is general consensus on the scope of alternatives and the impact analysis. We are willing to work with Corps staff to help facilitate this effort if necessary and we look forward to participating in upcoming interagency coordination meetings and reviewing draft documents as appropriate and as our resources allow. We hope that the

Corps will allocate sufficient resources to support a comprehensive analysis and independent review of applicant generated information/analysis that will be incorporated into the DEIS. Should you have any questions or wish to discuss our concerns, please contact me or Timothy Timmermann of EPA New England's Office of Environmental Review at 617/918-1025. Thank you for the opportunity to provide scoping comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert W. Varney", followed by a long, sweeping horizontal line that ends in a loop.

Robert W. Varney  
Regional Administrator

cc:

The Honorable Edward M. Kennedy, U.S. Senate  
The Honorable John F. Kerry, U.S. Senate  
Representative William Delahunt  
Secretary Robert Durand, Executive Office of Environmental Affairs  
Margo Fenn, Cape Cod Commission  
Michael J. Bartlett, United States Fish and Wildlife Service  
Peter D. Colosi, National Marine Fisheries Service  
Barry Drucker, United States Department of Interior  
Albert Benson, United States Department of Energy  
J. Mark Robinson, Federal Energy Regulatory Commission  
Thomas W. Skinner, Massachusetts Office of Coastal Zone Management  
Vincent Malkoski, Massachusetts Division of Marine Fisheries  
Charles J. Natale, Jr., Environmental Science Services, Inc.  
Len Fagan, Cape Wind Associates, LLC

November 21, 2001

Ms. Karen Adams  
Chief, Permitting Division  
United States Army Corps of Engineers, New England District  
696 Virginia Road  
Concord, Massachusetts 01742-2751

**Re:   *Application of Cape Wind Associates, LLC for US Army Corps Approval of  
The Cape Wind Project, Nantucket Sound and Yarmouth, Massachusetts  
ESS Project No. E159-009***

Dear Ms. Adams:

On behalf of Cape Wind Associates, LLC., Environmental Science Services, Inc. (ESS) is pleased to provide you with the attached Individual Permit Application, project plans, and supporting documentation for the proposed Cape Wind offshore wind energy project.

This application package contains the following information:

- Application for Department of the Army Permit (ENG Form 4345), Project Description, and Project Plan Set
- Alternatives Analysis
- Environmental Effects Assessment
- Section 404(b)(1) Compliance Assessment
- Essential Fish Habitat Assessment
- Endangered Species Act Assessment
- Massachusetts Federal Consistency Certification

As you know, the proposed Cape Wind Energy Project is a clean renewable energy facility sited in the offshore area of Nantucket Sound. The proposed project has the capacity to generate up to 420 megawatts of electric power to serve the needs the Northeastern Region, including Massachusetts, Cape Cod, and the Islands. Cape Wind Associates has conducted extensive technical reviews and field studies over the last twelve (12) months to fully evaluate the best available site for the Project as well as the type and extent of environmental effects. Cape Wind has also conducted extensive agency and public interest group outreach efforts to inform stakeholders of the project and its benefits as well as gather comments and thoughts about this exciting project.

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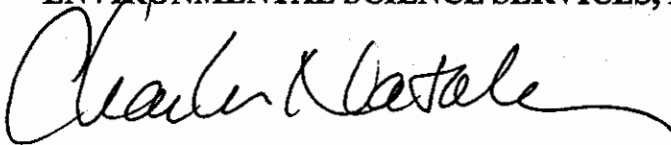


We look forward your review of the Application and commencement of your regulatory permitting process.

If you have any questions or comments on the Application or its supporting documentation, please do not hesitate to contact me at 781 431-0500 extension 105 or by email at [cnatale@essgroup.com](mailto:cnatale@essgroup.com).

Sincerely,

ENVIRONMENTAL SCIENCE SERVICES, INC.



Charles J. Natale, Jr.  
Senior Vice President, Managing Principal

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Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

## PRIVACY ACT STATEMENT

Authorities: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine Uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

## (ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO. #200102913	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
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## (ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME Cape Wind Associates, LLC. Mr. Len Fagan, Project Manager	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not require) Environmental Science Services, Inc. Mr. Charles J. Natale Jr., Senior Vice President, Managing Principal
6. APPLICANT'S ADDRESS 75 Arlington Street, Suite 704 Boston, MA 02116	9. AGENT'S ADDRESS 888 Worcester Street., Suite 240 Wellesley, MA 02482
7. APPLICANT'S PHONE NOS. W/AREA CODE a. Residence b. Business (617) 904-3100, ext. 122	10. AGENT'S PHONE NOS. W/AREA CODE a. Residence b. Business (781) 431-0500, ext. 105

## STATEMENT OF AUTHORIZATION

I hereby authorize, Environmental Science Services, Inc. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE

DATE

## NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

Cape Wind Project

13. NAME OF WATERBODY, IF KNOWN (if applicable) Nantucket Sound and Lewis Bay	14. PROJECT STREET ADDRESS (if applicable) Landfall: 43 Shore Road, Yarmouth, MA
15. LOCATION OF PROJECT Barnstable COUNTY Massachusetts STATE	Grid Interconnection: Willow Street, Yarmouth, MA

16. OTHER LOCATION DESCRIPTIONS IF KNOWN (see instructions) The wind turbine array will be located within the federal waters of Nantucket Sound, in the vicinity of Horseshoe Shoal. The northernmost turbines will be approximately 4.1 miles from the nearest land mass (Point Gammon), the southeastern most turbines will be approximately 11 miles from Nantucket, and the westernmost turbines will be approximately 5.5 miles from Martha's Vineyard. The preferred submarine cable landfall location is 43 Shore Road in Yarmouth, MA.

17. DIRECTIONS TO THE SITE

Landfall: Route 6 East to Exit #7 (Willow Street). Turn South on Willow Street and take first left onto Higgins Crowell Rd. Cross Route 28 onto Berry Avenue. Take the last right onto New Hampshire Avenue to the end. Turn right onto Shore Road. Number 43 is the second house on the left.

Grid Interconnection: Route 6 East to Exit #7 (Willow Street). Turn North on Willow Street to the NSTAR 115 kV transmission line right-of-way north of Summer Street.

18. Nature of Activity (Description of project, include all features) The proposed offshore wind energy project consists of the installation and operation of 170 Wind Turbine Generators (WTGs) on Horseshoe Shoal in Nantucket Sound. The WTGs will produce up to 1.1 megawatts (MW) of clean renewable energy using natural offshore wind resources of Nantucket Sound. Wind-generated energy produced by the WTGs will be transmitted to the mainland electric transmission system from a centrally located Electric Service Platform (ESP) via a submarine cable interconnection to a selected landfall site in Yarmouth, Massachusetts. The submarine cable system will consist of two (2) 115 kilovolt (kV) solid dielectric cable circuits jet-plow embedded into the seabed. The submarine cable system will then interconnect with an overland cable system installed underground within existing public rights-of-way (ROW) and roadways in the Town of Yarmouth where it will interconnect with an existing NSTAR 115 kV electric transmission line. The clean renewable energy produced by the Wind Park will be transmitted by this cable system to the electric transmission system serving Cape Cod, the Islands and the New England region.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of the Project is to generate up to 420 MW of clean, renewable wind-generated energy that will be transmitted and distributed to the New England regional power grid, including Cape Cod and the Islands. The approximate construction start date for the project is April 2004, with the Project commercially operating in September 2005.

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge Wind Turbine Generator foundation systems may require scour protection to avoid loss of load bearing capacity for the monopile foundation. Scour protection would require the placement of stone riprap or concrete matting on the seabed surface surrounding the foundation. Installation of the monopile foundation will be by impact hammer or vibration thereby minimizing bottom disturbance and turbidity. The submarine cable system will be jet-plow embedded into the seabed to a depth of approximately 6.0 feet. The landfall transition interconnection of the submarine cable system with the overland cable system will be constructed utilizing Horizontal Directional Drilling thereby avoiding direct disturbance of the seabed and shoreline areas.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

Approximately 100 cy of 3"-12" stone riprap will be placed around each WTG foundation, if necessary. Scour protection may not be required for each WTG and will be evaluated in the final design. If all 170 WTGs require post construction scour protection, a total of approximately 17,000 cy of 3"-12" stone riprap will be placed around the foundations.

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

If scour protection is necessary, approximately .021 acres of the seabed will be affected at the base of each WTG. If all 170 WTGs require scour protection, a total of 3.6 acres of the seabed will be effected. No upland wetlands or other waters will be effected by the Project.

23. Is Any Portion of the Work Already Complete? Yes \_\_\_\_\_ No X IF YES, DESCRIBE THE COMPLETED WORK

24. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

Zakher, Fouad	49 Shore Road,	Yarmouth MA.	02673	Map 16 Parcel #1
Fitzhugh, Michael	43 Shore Road,	Yarmouth MA.	02673	Map 16 Parcel #2
Town of Yarmouth	37 Shore Road,	Yarmouth MA	02673	Map 16 Parcel #3
Stigmatine Fathers Inc.	32 New Hampshire Avenue,	Yarmouth MA	02673	Map 16 Parcel #58

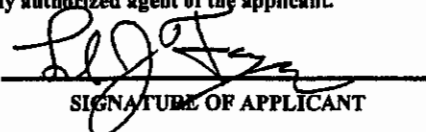
25. List of Other Certifications or Approvals/Denials Received from other Federal, State or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
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See Attachment A.

\*Would include but is not restricted to zoning, building and flood plain permits

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

  
SIGNATURE OF APPLICANT

11/21/01  
DATE

  
SIGNATURE OF AGENT

11/21/01  
DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1 001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$1 0,000 or imprisoned not more than five years or both.



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Suite 704  
Boston, MA 02116  
617-904-3100  
Fax: 617-904-3109  
www.capewind.org

April 16, 2002

Colonel Brian E. Osterndorf  
District Engineer  
United States Army Corps of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01747-2751

Re: **Cape Wind Project, File No. 200102913; Environmental  
Impact Statement Scoping Comments**

Dear Colonel Osterndorf:

Cape Wind Associates hereby offers comments respecting the scoping of its Draft Environmental Impact Statement ("DEIS"), including response to certain of the concerns raised by the U.S. Fish and Wildlife Service (by letter dated April 1, 2002, the "FWS"), EPA New England (by letter dated April 5, 2002, "EPA") and the Massachusetts Office of Coastal Zone Management (by letter dated April 5, 2002, "CZM"). Most importantly, we concur with the general position of such agencies that "the development of renewable, non-polluting energy sources" is an important national policy objective and that, on a more regional basis, "the generation of electricity for fossil fuels is the single largest industrial source of air pollution in New England" such that "an increase in the amount of electricity generated in the region from renewable sources such as wind power" is in itself an important policy objective. See EPA at 2, CZM at 1. While we share the foregoing basic objectives, we do have several concerns over scoping positions raised by the agencies, as set forth below.

**1. The ACE Should Conduct the Requisite Project Review in  
an Expedited Manner Consistent With Executive Order  
13212.**

As an initial matter, Cape Wind respectfully requests that the current permit review proceed in a manner consistent with Executive Order 13212, "Actions to Expedite Energy-Relating Projects". In recognition of the need "to take additional steps to expedite the increased supply and availability of energy to our Nation", Executive Order 13212 directs each Federal agency to conduct its statutory review of proposed energy facilities in an expedited manner, as follows:

The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well-being of the American people. In general, it is the policy of this Administration that executive departments and agencies (agencies) shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy.

\*\*\*

For energy-related projects, agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections. The agencies shall take such actions to the extent permitted by law and regulation, and where appropriate.

While the DEIS should certainly provide a full review of this proposal, it is also important that each of the agencies remain mindful of the foregoing statement of Federal policy at each step of this proceeding and, in particular, at the critical juncture of defining the scope of the DEIS.

**2. The ACE Has Full Authority Under Current Law to Review and Authorize the Location of the Proposed Structures on the Seabed.**

Although not directly related to the scope of the DEIS, the implication has been made that existing Federal law fails to provide a clear process for the review and authorization of Cape Wind's proposed location of structures on the seabed beneath Federal waters. Such implication, however, is incorrect and contrary to the clear and long-standing authority of the ACE under Section 10 of the Rivers and Harbors Act, as confirmed by administrative practice and the interpretative decisions of the Federal courts. The Federal courts have long held that the ACE's powers under Section 10 constitute a delegation of Congressional authority, such that, absent specific statutory provisions to the contrary, structures in Federal waters authorized by the ACE under Section 10 are deemed under law to have been "affirmatively authorized by Congress" without any further action. See, e.g., Citizens' Comm. for Env. Protection v. U.S. Coast Guard, 456 F. Supp 101, 115 (D.N.J. 1978), following the seminal case of Wisconsin v. Illinois, 278 U.S. 367, 412-413 (1929). With specific reference to such authority of the ACE for structures on the Outer Continental Shelf, also see ACE Regulatory Guidance Letter No. 88-8 and Atlantic Development Corp. v. U.S., 379 F.2d 818, 826 (5th Cir. 1967). It is pursuant to this delegated Congressional authority that the ACE has "affirmatively authorized" numerous

privately-owned structures (including the undersea cables currently traversing Nantucket Sound) on the seabed without additional action by Congress or other Federal agencies.<sup>1</sup>

There should also be no doubt that the provisions of current law and the ACE's regulations provide the mechanisms for a complete and well-defined review process, which includes consideration of each of the policy concerns raised to date, including any relating to the so-called "public trust" issues. Even if one assumes "public trust" concepts to be applicable, the ACE's review under Section 10 routinely balances the benefits and detriments associated with the location of private facilities in public waters. Indeed, the following standard of review for Section 10 currently set forth in the ACE's regulations at 33 CFR § 325.3(c) confirms that a comprehensive "public interest" balancing standard is applicable to the current permit proceeding:

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. (Emphasis added.)

Thus, it is clear under current law that (i) the ACE has full authority to review and authorize the proposed structures in the seabed beneath Federal waters and (ii) the existing ACE procedures and regulations already provide for the full consideration of any relevant issues, including those relating to the placement of private structures on the seabed. The stated comments on the authority of the ACE thus present no basis for delay or disruption of the current proceedings.

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<sup>1</sup> Although additional authority, by lease, permit or otherwise, may be required with respect to certain activities (such as proposals to extract, remove and sell publicly-owned minerals from beneath the outer continental shelf) where specifically provided by statute, no such activities are raised in this proceeding.

**3. The ACE Should Reject the Proposal of FWS that the Current Proceedings be Suspended Pending the Completion of a Comprehensive and Open-Ended Federal Master Planning Process for the OCS.**

The ACE should reject the proposal of FWS that it "step back" (i.e., suspend indefinitely) the ongoing proceeding until such time as the Federal government has completed a "broad-based zoning or master planning analysis of the OCS lands off the New England Coast," a comprehensive planning exercise that it deems to be "a necessary first step". The FWS has not specified the number of years that it would take the Federal government to undertake and complete such a comprehensive project. Accordingly, the FWS proposal amounts to an effective suspension and moratorium on the present application, as well as any other offshore development proposals, for an indefinite period of years.

The ACE should decline to enact such a moratorium for the following reasons. First, such a proposal is clearly at odds with current Federal policy, including Executive Order 13212, which plainly directs all Federal agencies to expedite energy-related projects in a manner consistent with existing law and regulation. Second, although FWS is within the Department of the Interior ("DOI"), its position in this instance is directly contrary to the publicly stated policy position of the Secretary of Interior that the Nation should "seek the best ideas for reducing delays and bottlenecks in producing renewable energy." Remarks to National Conference on Renewable Energy, Nov. 28, 2001. Third, and as set more fully below, the ACE can fully review the current application without suspending proceedings or imposing an open-ended moratorium. Indeed, the task at hand is to study the range of reasonable alternatives to the proposed application, a task that can be accomplished in a full and expeditious manner without a delay of an undetermined period of years.

**4. The ACE Should Retain the Applicant's Statement of Purpose.**

As initial matter, the scope of reasonable alternatives should be based upon the Applicant's stated purpose of the project, i.e., to install and operate a commercial scale (i.e., 420 mw) merchant electrical generating facility located in New England utilizing renewable wind energy as its fuel source. In particular, the ACE should reject the proposal of FWS that the Applicant's stated purpose be replaced with a wide-ranging purpose defined simply as "the production of electricity for use in the New England Power Grid," a statement which would exclude any objective of producing clean, renewable or wind power, as well as any objective of producing such power in a magnitude that would yield substantial societal benefits.<sup>2</sup> Such position would also deny the reality that Cape Wind set out, deliberately, to develop a substantial volume of clean and renewable wind energy at this location, largely in response to the State and Federal policies and incentives encouraging just such action. The examples of such renewable

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<sup>2</sup> EPA, in contrast, would more properly limit the project's purpose to the development of "a commercially viable renewable energy facility" within New England.

policy initiatives include the Renewable Portfolio Standards of Massachusetts, Connecticut, and Maine, the Federal Windpowering America Program, the establishment and recent extension of the production tax credit for renewable energy and, notably, the Federal policy of NEPA itself set forth at § 4331(b)(6) thereof that the Nation "enhance the quality of renewable resources." Thus, the Applicant's stated purpose properly reflects the actual and well-established purpose of the timely development of a substantial amount (420 MW) of clean and renewable wind energy (and not nuclear or fossil energy or an amount unable to make a substantial regional contribution), a purpose which is entirely consistent with well-established public policy objectives.

**5. The Scope of the DEIS Should be Limited to a Reasonable Range of Alternatives.**

**A. Introduction.**

The study of alternatives to the proposed action is a critical part of the DEIS process under NEPA, but it is well-established that the scope of study is bounded by feasibility and appropriately limited to "reasonable" alternatives, which are defined as "those that are practical or feasible from the technical and economic standpoint and using common sense". 46 Fed. Reg. 18026 (1981). The ACE should thus limit the detailed study of alternatives to those "reasonable" alternatives that are demonstrated, after initial viability screening, to be practical or feasible from a technical and economic standpoint, using common sense. Several of the suggestions from the commenting agencies, however, would go well beyond the foregoing bounds of an appropriate scope of DEIS. For example, the FWS urges a scope that would "screen the universe" of generation alternatives, without regard to fuel type or renewability. FWS implicitly would also require detailed alternative analysis of "potential development for wind, wave, and perhaps other forms of energy development" anywhere on the OCS, which would apparently include a range of potential technologies not commercially viable at this time. CZM also seeks a full alternative analysis of all types of potential energy sources and sites for generation within New England, without apparent reference to technology type or renewability. As set forth below, the ACE should reject such proposals as beyond the proper scope of alternative study.



**B. The DEIS should be limited to a reasonable number of alternative technologies.**

Federal courts interpreting the provisions of the NEPA in the specific context of proposed power plants have consistently found that the scope of alternative study within an EIS is bounded by feasibility, subject to the common sense interpretation of the permitting agency. In Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 551 (1978), the United States Supreme Court confirmed the practical limitations upon the scope of study of potential alternatives in the context of the EIS for a nuclear power plant, as follows:

NEPA, of course, has altered slightly the statutory balance, "requiring a detailed statement by the responsible on . . . alternatives to the proposed action." 42 U.S.C. § 4332(C). But, it should be obvious even upon a moment's reflection, the term "alternatives" is not self-defining. To make an impact statement something more than an exercise of frivolous boilerplate the concept of alternatives must be bounded by some notion of feasibility.

Id. The courts have gone on to interpret such concept of "feasibility" to require detailed consideration of those alternatives to proposed power plants that had been developed to the point of commercial viability within the project's proposed timeline. In Carolina Environmental Study Group v. U.S., 510 F.2d 796, 800-801 (D.C. Cir. 1975), the court upheld the propriety of an EIS for a proposed nuclear reactor in the face of criticism that it did not give full consideration to the potential development of alternative and renewable technologies, and found that NEPA's requirements were appropriately limited to alternatives that had reached commercial viability, and not those "deemed only remote and speculative possibilities":

The Study Group argues that because the nuclear plant is to operate for several decades, alternative power solutions which may be developed, such as oil shell, geothermal energy, and solar energy, should have been considered. That contention presupposes future developments which are both speculative developments in which are both speculative and remote.\*\*\* The requirement is not to explore every extreme possibility which might be conjectured. Rather, we view NEPA's requirements as one of considering alternatives as they exist and are likely to exist.

Id. (emphasis added). In Natural Resources Defense Council v. Morton, 458 F.2d 827, 837 (D.C. Cir. 1972), the court similarly upheld the EIS an offshore oil project where the plaintiffs had again argued that the potential for future developments in alternative energy technology were not fully considered. The court noted that the EIS stated that "while these possibilities hold great promise for the future, their impact on the energy supply will not likely be felt until after

1980 [some 8 years later], and will be dependent on environmental safeguards and technological developments." The court thus concluded that such alternatives required "no additional discussion at this juncture," but could be germane to subsequent energy project proposals "in the light of changes in technology or in the variables with energy requirements and supply." *Id.*

Thus, in the present context, the EIS should properly be limited to the study of those alternative technologies with demonstrated commercial feasibility that would allow implementation on a timeline consistent with that of the proposed project, *i.e.*, the supply of renewable volumes by 2005 (i) to satisfy Renewable Portfolio Standard annual requirements, (ii) to address the recently documented concerns of ISO-New England as to system reliability by the winter of 2005 due to over-dependence upon natural gas for new electric generation<sup>3</sup>, and (iii) to fulfill other more general policy objectives to implement cleaner renewable sources in an expeditious manner.<sup>4</sup>

**C. The DEIS should also be limited to a reasonable number of alternative sites.**

The foregoing judicial guidance as to this practical and common sense limitations of NEPA study requirements also applies to the number of alternative wind power sites that must be studied. In the leading case of Seacoast Anti-Pollution League v. N.R.C., 598 F.2d. 1221 (1<sup>st</sup> Cir. 1979), the First Circuit rejected arguments that an EIS for the Seabrook nuclear power plant failed to consider a sufficient number of alternative sites. The EIS in that case had studied sites located exclusively within the applicant's service area (*i.e.*, in northern New England), and opponents argued that the lead agency was required to include consideration of additional alternative sites located in southern New England. In rejecting such argument, the Court provided as follows:

While examining alternatives has been called the "linchpin" of NEPA's mandate, Monroe County Conservation Council, Inc. v. Volpe, 472 F.2d. 693, 697-98 (2<sup>nd</sup> Cir. 1972), there is no single rule for determining how many and what kinds of alternatives to study in a given case; as the Supreme Court stated in Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 551, 98 S. Ct. 1197, 1215, 55 L. Ed. 2d 460 (1978), "Common sense . . . teaches us that the "detailed statement of alternatives" cannot be found wanting

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<sup>3</sup> See report entitled Steady State and Transient Analysis of New England's Interstate Pipeline Delivery Capability, 2001-2005, dated February 2002 and posted in ISO-New England's website, noting that substantial amounts of (up to 3,960 MW) of gas-fired generation are deemed to be "at risk" by the winter peak of 2005.

<sup>4</sup> Even if additional renewable technologies do become commercially viable at some future, they would not necessarily need to be implemented to the exclusion of today's commercially viable wind energy. To the contrary, the substantial magnitude of renewable energy necessary to implement the shift in the overall regional generation portfolio intended by public policy would likely justify the development of such future technologies in addition to the development of the wind technologies that are commercially feasible today.

simply because the agency failed to include every single device and thought conceivable by the mind of man." The issue here is whether the Commission should have compared the site at Seabrook, of which PSCO sought permission to build, with more alternative sites than it did.

Id. at 1223. The court went on to explain that a power plant EIS need not consider each of the potentially endless alternative sites, as follows:

Vermont Yankee makes it clear that the NEPA requirement of studying alternatives may not be turned into a game to be played by persons who for whatever reason and with whatever depth of conviction are chiefly interested in scuttling a particular project. There would be no end to the alternatives that might be proposed if proponents had no obligation to do more than make a facially plausible suggestion that a particular alternative might be of interest . . . .

Id. at 1230-31. The First Circuit went on to conclude that the limited number of alternative sites studied in the EIS (each of which was located within the Applicant's service territory and none of which was found to be "obviously superior" to the preferred site) was sufficient to comply with NEPA, without consideration of additional potential sites located in southern New England. Also see Scenic Hudson Preservation Conference v. FPC, 453 F. 2d. 463 (2<sup>nd</sup> Cir. 1971), cert. denied, 32 L.Ed.2d 813 (1972), upholding the adequacy of an EIS which studied five alternative sites for a 2,000 MW electric generating project, all of which were located within a 100 mile radius of the preferred site. Thus, the DEIS should be limited to a reasonable number of alternative sites, and not the virtually infinite universe of potential alternative locations.

## 6. Conclusion

For the reasons set forth above, the ACE should proceed in a manner that balances the need to fully review this permit application on a "fully-informed and well-considered basis" with the Federal directive to expedite energy-related projects. In particular, the scope of the DEIS should be limited to a reasonable range of alternatives, in accordance with the foregoing authorities.

Thank you for your consideration.

Sincerely,



Dennis J. Duffy  
Vice President

# **ESS** ENVIRONMENTAL SCIENCE SERVICES, INC.

ENVIRONMENTAL SCIENTISTS, ENGINEERS, AND PLANNERS

April 19, 2002

Karen Kirk Adams, Chief  
Permits and Enforcement Branch  
U.S. Army Corps of Engineers  
New England District  
696 Virginia Road  
Concord, Massachusetts 01742-2751

**Re:   Requests from Inter-agency Scoping Meetings  
      Cape Wind Project EIS (USACE File # 200102913)  
      ESS Project No. E159**

RECEIVED

APR 23 2002

REGULATORY DIVISION

Dear Karen:

This letter is meant to respond to your requests for additional information and clarification on several points that were made at recent inter-agency scoping meetings for the Cape Wind Project.

At the April 4, 2002 meeting at the USACE offices you requested more detailed information and background on the following areas related to the Purpose and Needs and Alternatives Analysis discussions:

## **"Commercial" scale justification**

In order to define, or to put into context what is considered a "commercial" scale project and why a 420 MW project is being proposed, CWA has explained that such a project would need to be connected to a primary transmission facility (PTF) of the ISO New England electrical transmission system. According to a review of ISO New England data ([www.iso-ne.com](http://www.iso-ne.com)) the average size of a permitted new or re-powered PTF (which would meet the definition of "commercial" scale as used above) is approximately 520 MW, as compared to the project's 420 MW. Note that the projected average output for the Cape Wind project would be approximately 170 MW or about a third of the average size of a typical recent commercial facility.

A "commercial" scale project of this size is necessary in order to have any significant impact on the need for increased fuel diversity, reduced reliance on foreign fuel supplies, improved regional air quality, reduction in green house gas emissions and other environmental benefits addressed in the Purpose and Needs Statement.

The economic viability of a project of this type depends on a large number of factors, but in the most simplistic terms the revenue from the output of energy produced must be greater than the cost for building the generation facilities and producing the electricity. There are a number of substantial "fixed" up-front costs associated with a project of this type which necessitate a "commercial" scale of approximately 400-500MW in order to ensure that the project is financially sustainable. These "fixed" or infrastructure costs, while being marginally variable with size, would include transmission costs (interconnection cables between turbines, an Electric Service Platform (ESP), the 115 kv



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cables from ESP to landfall, upland cabling, riser station at the Nstar interconnect), permitting costs, and financing costs. These up-front infrastructure costs can conservatively run into the \$200 million range – and the project still would not have constructed a single turbine or produced a single MW of electricity. Add to these high infrastructure and development costs the price of each wind turbine generator (WTG), factor in the variability of the wind resource (which determines how much and how often each machine will actually be producing energy), and it is clear why a wind project of the scale proposed is necessary for financial sustainability.

#### **Primary Siting Criteria: Wind Power classification of 4 or greater**

The wind power classification is a direct function of the average wind speed in an area, as defined by the US Department of Energy National Renewable Energy Lab. An area designated with a wind power class 4 has an estimated average wind speed of between 15.7 and 16.8 mph at a height of 50 meters. An area designated as a lesser class 3 would have an estimated range of between 14.3 and 15.7 mph. The energy content of the wind varies with the cube (the third power) of the average wind speed, so a potential difference of 1.25 mph in average wind speed (a conservative difference between a class 3 and a class 4 site) equates to a 27% gain in a site's energy generating potential.

A wind project's installed capacity is the theoretical maximum that the project could produce. For example a project consisting of 100 wind turbine generators (WTGs) each rated to produce 2.5 MW would have an installed capacity of 250 MW. The actual amount of electricity produced by the project on average is less than its installed capacity due to many factors (collectively referred to as the project's capacity factor) including the arrangement of the turbines, surrounding topographic features influencing the wind resource, transmission line and other electrical and mechanical losses, the variability of the wind resource and the energy in the wind itself. A wind power classification of 4 or greater is necessary in order for a commercial project to achieve a high enough capacity factor, and produce an economically viable project.

#### **Primary Siting Criteria: Minimum of 10,000 acres**

As wind passes through a turbine, wind energy is converted to electricity. After passing through the turbine wind energy diminishes and the flow is interrupted. This long trail of slower air is referred to as the downwind wake.

Wind turbines that are arranged in parks (or grids) need to be spaced at sufficient distance from each other to minimize the effects of downwind wake energy losses around the downstream WTGs. The spacing between turbines allows the wind to smooth out and regain its linear flow and speed prior to reaching the next downstream WTG.

In order to achieve the commercial scale as proposed, with adequate spacing between turbines to maintain a high enough capacity factor for economic viability, a minimum area of 10,000 acres was chosen as the criteria for required site area.

At the April 8, 2002 meeting at the USACE offices, you requested more detailed information on the modeling that Cape Wind Associates has proposed for use in assessing impacts on the marine environment.

#### **Analytical Existing Conditions Modeling of Nantucket Sound**

Cape Wind Associates (CWA) has contracted with Woods Hole Group Inc. (WHG) of Falmouth Massachusetts to evaluate the existing conditions in Nantucket Sound. WHG has proposed a desktop modeling investigation, designed to provide information that will help characterize the regional and local processes surrounding the alternative sites within Nantucket Sound. Specifically, the processes that will be evaluated include waves, currents, and sediment transport. An analytical existing conditions model will be developed and the wave climate, current regime, bathymetric variation, and sediment distribution will be evaluated.

Initially WHG will conduct a search and review of existing literature, including available data sources of wave, tide, current, and sediment characteristics for the Nantucket Sound region. This information will be supplemented by the site specific geophysical and geotechnical data collected by Ocean Surveys Inc. (OSI) during the summer of 2001 under the direction of CWA and ESS which extensively surveyed the area of Horseshoe Shoal and alternative cable routes.

The analytical existing conditions model will then be developed to characterize the existing wave, current, and sediment transport processes in the Nantucket Sound region. The model will provide the baseline information upon which an array of potential impacts can be compared and assessed. The model will be developed based on established analytical relationships, and results will be compared with available field measurements, including data obtained from the deployment of an Acoustic Doppler Current Profiler (ADCP).

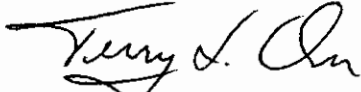
WHG will conduct ADCP data collection by boat, along transects similar to those used in the Cape Wind avian field studies. A 1200kHz ADCP will be used to continuously record current characteristics over two tidal cycles. Current speed and direction values will be reported at 1-meter depth intervals throughout the water column. A differential GPS system will be used to provide positioning data. Data from both sensors will be integrated with a laptop computer and referenced to a common time base. Data will be displayed in real-time during survey operations to allow continuous quality control. After the survey, the ADCP data will be post-processed, analyzed, and graphically presented to identify the time-varying and spatial structure of the currents over Horseshoe Shoal and the surrounding area. In addition, the ADCP data will provide verification for the currents in the analytical existing conditions model.

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I hope the information presented above is helpful in further defining the issues and questions raised in recent meetings as you develop the scope for the DEIS / DEIR. If you have any questions, or need further clarification please do not hesitate to contact me at 781-431-0500 x190.

Sincerely,

ENVIRONMENTAL SCIENCE SERVICES, INC.



Terry L. Orr  
Project Manager

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